

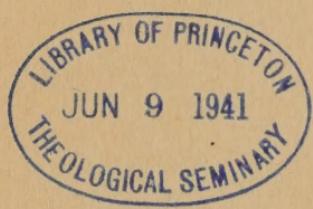
Corn Bread

and

CREEK WATER



CHARLES MORROW WILSON



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CORN BREAD AND CREEK WATER

Books by CHARLES MORROW WILSON

ACRES OF SKY

MERIWETHER LEWIS, OF LEWIS AND CLARK

BACKWOODS AMERICA

RABBLE ROUSER

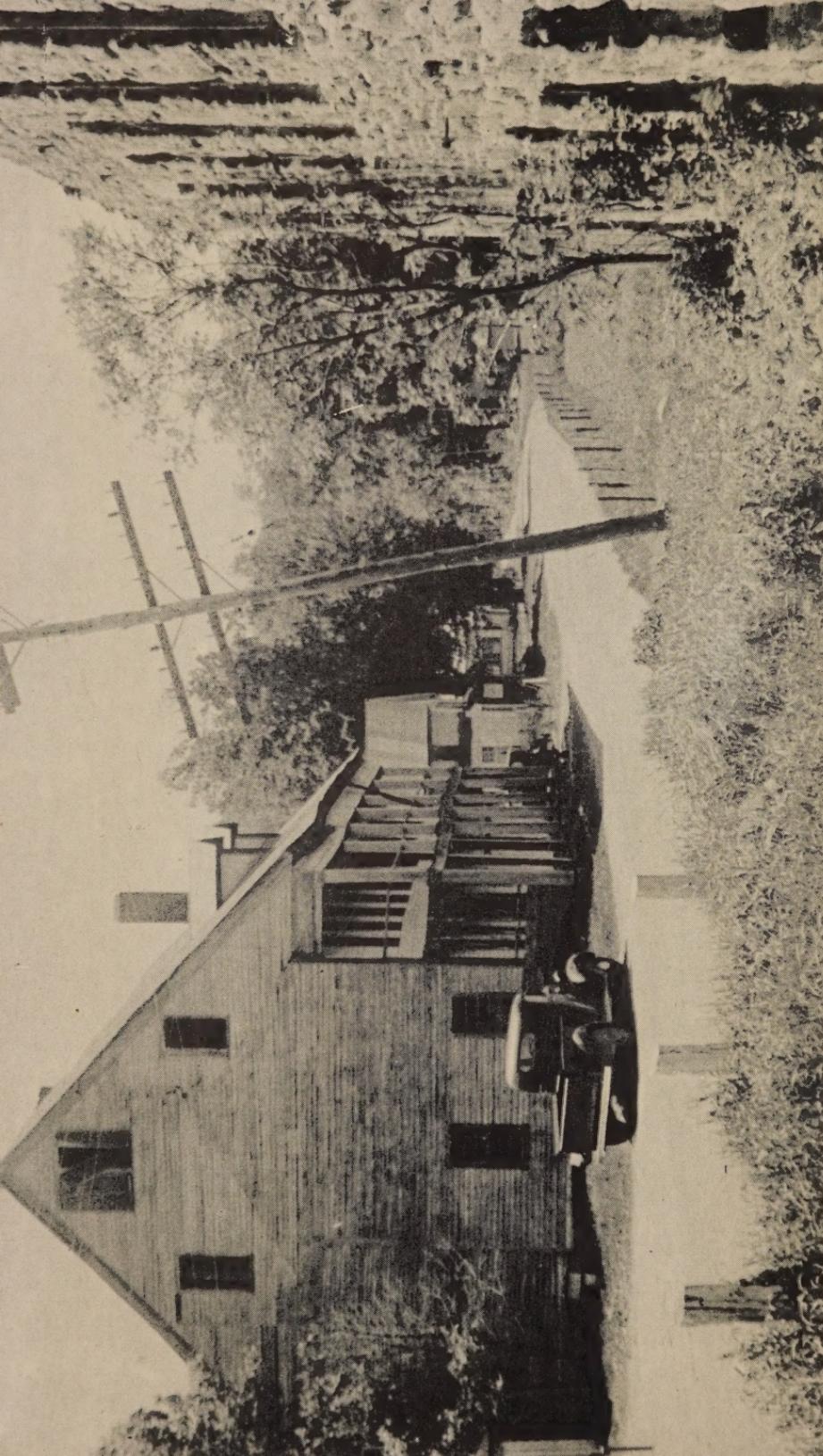
ROOTS OF AMERICA

AROOSTOOK

COUNTRY LIVING

AMERICA AT WORK

CORN BREAD AND CREEK WATER: THE LANDSCAPE OF
RURAL POVERTY



Iris Woolcock

ALMOST DESERTED VILLAGE

CHARLES MORROW WILSON



The Landscape of Rural Poverty:

Corn Bread

and

CREEK WATER

New York

HENRY HOLT AND COMPANY

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Part One

ANATOMY OF RURAL POVERTY

1

EXIT THE SOIL!

THE life and times of people who live from land are measured in terms of a few inches of topsoil. For millenniums rich soil has spelled good lives for the men and women who till that soil, while poor soil has spelled tragedy, privation, and downfall.

The topsoil of the United States—indeed, the topsoil of most nations—is rapidly failing. Throughout most of our country, and much of the world, productive earth becomes exhausted. Since soil is the ultimate savings bank of a nation, most farmers and most nations of farmers are taking dividends out of soil capital. Continuance of this practice spells death to agriculture, just as it would to any other enterprise of production.

By nature, productive soil is a masterpiece of balance. Its energy store consumed by the plant community approximately balances the energy store acquired directly from the sun, from beneficial micro-organisms, and from all other energy sources. The equilibrium, as a rule, is more or less permanent, so far as nature is concerned. Herbaceous populations do not change extensively. Neither does soil fertility—in the wild.

The work of man can easily upset this equilibrium. So, occasionally, can drastic changes in weather, calamities such as fire or flood, and invasions by parasites, fungi, insects, or other “natural enemies.” But man is the usual factor of upset.

To an appalling degree soil exhaustion is man-made, and motivated by human economics. The life-giving soil of the United States is a particularly apt example of this truth. According to G. V. Jacks and R. O. Whyte:¹

¹ All notes are brought together in an appendix which follows the end of the text.

"The main economic cause of recent accelerated erosion has been the transfer of capital across regional or political boundaries and its repayment with soil fertility. Had Europe solved its population problem by exporting more men and less capital and therefore neither needing or being in position to buy so much food from abroad the world would have been poorer in many ways, but there would have been more soil left for posterity."

The same authors join in an even more startling estimate:

"Probably more soil was lost from the world between 1914 and 1934 than in the whole previous human history. By 1935 the illusion that nations could get rich quick at the expense of a benevolent, unresisting nature had been finally shattered."

Since 1770, or still earlier, the topsoil of our nation has been sold to Britain, Europe, the West Indies, and the Orient for cash and for barter. Tobacco opened the ruinous cycle. Cotton, wheat, small grains, corn, and meats followed in the wake of tobacco. The climax of soil wreckage was reached with the first World War and its prolonged and depressing period of reconstruction. Throughout much of the world and almost all of the United States, the combined incidences of booms, slumps, droughts, and nationalism have produced new highs in the process of soil ruination.

In May, 1934, an estimated *three hundred million tons* of mid-western soil was lifted by wind and blown across the continent to blot visibility in New York, Boston, and indeed along the entire Atlantic littoral. Thus May, 1934, was another memorable month in the agrarian history of the United States; a month when soil erosion penetrated into the lungs and minds of city dwellers, industrialists, economists, and politicians alike. Even Washington, D. C., became aware of a vast continuing American dilemma. Indeed, the social significance of erosion, and the economic dilemmas of failing soils, finally became noticeable to national weekly magazines, even to the *Saturday Evening Post*, H. L. Mencken, and the *New York Herald Tribune*.

The withering depression accented this dilemma of eroding soils. Farmers were selling products below cost and were thus financially unable to maintain or improve soil fertility. New Planners and social thinkers of the New Deal, many of them hoisted suddenly from professorial obscurity, set forth the "intellectual" position that

soil can be saved and its fertility restored only when agricultural prices can be raised to a level compatible with the price range of industrial goods.

This is another instance of underdone thinking. A farmer cannot, as a rule, actively improve or even maintain fertility of his soil when he must grow crops at a loss. On the other hand, the records prove that man's worst abuse of land has occurred most frequently during periods of inflated or subsidized farm prices. In many countries, and particularly our own, this truth was proved during the clamorous twenties. Periods of industrial expansion are not conducive to conservation of soil. For "conservation farming" is rarely, if ever, immediately profitable to the tiller or to the nation.

It is the evident impotence, or the collapse, of "international capitalism" that today presents the best possibility for concerted soil conservation in the United States.

In man's incessant struggle to gain mastery of the soil lies the making of the root-bed of agrarian poverty. For erosion, even more than dictators, humbles nations, blackens lives and futures, and blocks the way to El Dorados. Erosion grows into predicaments more devastating than those of politics, or debt, or even war. For just as erosion buried in dust, sand, and ruin the great civilizations that were Carthage, Rome, Persia, Mesopotamia, much of North China and particularly the lands of the Yellow River, so erosion may continue to bury world capitals of today and tomorrow—not excepting our own.

To be sure, such a fate is not inevitable. Europe, for example, while wasting her man power in vindictive wars and swapping culture for incendiary bombs, has nevertheless largely protected her soils from erosion. The tiny British Isles now grow more farm crops than all of stupendous and wasteful Canada. Ancient fields of France still produce the heaviest wheat yields in all the world, and storm-scarred Scandinavia leads most of the world in cattle husbandry.

Erosion is the unfailing symptom of maladjustment between man and his environment. We cannot attribute erosion merely to climate, nor can we restore soils by erratic doctorings with commercial fertilizers. For soil fertility is not merely a supply of plant

food. Usually the exhausted soil is the soil that has lost its stability. Erosion begins with a diminishing of fertility, but the real malady of erosion is a loss of soil's ability to remain in place.

And the term "fertility" is equally applicable to a soil and to its vegetation. Soil acquires life from plants just as plants take life from soil. Living vegetation, not chemical concentrates, is the great protector of soil. Destruction of "natural" or original growths of vegetation, without attempt to replace a similar type of cover, is the usual beginning of soil ruin.

The essential story of erosion in the United States is one of greed and social stupidity. It began with ungoverned deforestation—the militant clearing of new fields and farms. This was followed by one-crop farming systems of corn, cotton, or wheat; by overstocking and pillaging of grasslands; by destructive exploitation of "dry-land farms." Thus wind and water losses of the all-important top-soils have already dealt ruin to at least 125,000,000 acres of once tillable land in the United States. From this arises the cruel likelihood that our domains of rich soils will be halved within another fifty years, that increasing poverty and ultimate agrarian extinction are foretold by the stars, sands, and silt-loaded rivers of a still great nation.

These are reasons why the Soil Conservation Service of the Department of Agriculture has become one of the most significant departments of our national government. Since the beginning of 1937, the work of the Soil Conservation Service has been centered in soil conservation districts—co-operating groups of farmers permitted by enabling acts to organize soil districts with the status of state subdivisions. When the soil district is granted a certificate of organization by the state, farmers are legally authorized to engage in co-operative action to combat erosion, and to prevent local misuse of land by voting land-use regulations similar to town or city zoning ordinances.

Erosion of soil is man-made. If it were a natural potentiality, soils would have disappeared long before the coming of man. Nature cherishes her productive earth. Live roots break up the soil and keep it aerated. Dead roots provide manure. Earthworms and rodents mix soil particles in various depths. Microbiology, decay of flora, freezing and thawing, all serve to hold soil in biological community. But soil conservation practice may not forget that plants

are as vital to the life of soil as soil is to the life of plants and soil and plants together, not separately, must feed, clothe, and shelter mankind.

That is reason enough for the principle of regional conservation of soils to stand out as one of the most memorable legislative attainments of American history. I refer in particular to the Standard State Soil Conservation Law as devised by the Department of Agriculture for recommendation to all state legislatures.

This proposal act contains an important dissertation upon erosion and national life. I quote, in part, from Section Two of the act:

A. . . . That the farm and grazing lands of the State of — are among the basic assets of the State and that the preservation of these lands is necessary to protect and promote the health, safety and general welfare of its people; that improper land-use practices . . . are now causing and contributing to a progressively more serious erosion of the farm and grazing lands of this State by wind and water . . . that failure by any land occupier to conserve the soil and control erosion upon his lands causes a washing and blowing of soil and water from his lands on to other lands and makes the conservation of soil and control of erosion on such lands difficult or impossible.

B. . . . That the consequences of such soil erosion in the form of soil-blown and soil-washing or the silting and sedimentation of stream channels, reservoirs, dams, ditches and harbors; the loss of fertile soil material in dust storms; the piling up of soil on lower slopes, and its deposit over alluvial plains; the reduction in productivity or outright ruin of rich bottom lands by overwash of poor sub-soil material, sand and gravel swept out of the hills . . . loss of soil and water which causes destruction of food and cover for wild life . . . a diminishing of the underground water reserve which causes water shortages, intensifies periods of drought, and causes crop failures; an increase in the speed and volume of rainfall runoff, causing severe and increasing floods, which bring suffering, disease and death; impoverishment of families attempting to farm eroding lands; damage to roads, highways, railroads, farm buildings and other property from floods and from dust storms; and losses in navigation, hydro-electric power, municipal water supply, irrigation developments, farming and grazing.

C. That to conserve soil resources and control and prevent soil erosion it is necessary that land-use practices contributing to soil wastage and soil erosion be discouraged and discontinued, and appropriate soil-conserving and land-use practices be adopted and carried

out; that among the procedures necessary for widespread adoption, are carrying on of engineering operations such as the construction of terraces, terrace outlets, check-dams, dikes, ponds, ditches and the like; the utilization of strip-cropping, lister furrowing, contour cultivation; land irrigation; seeding and planting of waste, sloping, abandoned or eroded lands to water-conserving and erosion preventing plants, trees and grasses; forestation and re-forestation; rotation of crops; soil stabilization with trees, grasses, legumes, and other thick-growing, soil-holding crops; . . . and retirement from cultivation of steep, highly erosive areas and areas now badly gullied or otherwise eroded.

D. It is hereby declared to be the policy of the legislature to provide for the conservation of soil and soil resources of this State, and for the control and prevention of soil erosion, and thereby to preserve natural resources, control floods, prevent impairment of dams and reservoirs, assist in maintaining the navigability of rivers and harbors, preserve wild life, protect the tax base, protect public lands, and protect and promote the health, safety, and welfare of the people of this State.

So far this form-letter legislation has met surprisingly little opposition. It seems highly probable that all or nearly all states of the Union will eventually adopt this or a similar soil conservation law, with specific terms and phrases better adapted to local needs.

When the enabling law has been enacted the state government selects a supervisory committee to help in drawing up "programs" for the various districts. Forming a district necessitates merely that a minimum of twenty-five occupants of land (either owners or tenants) petition the central committee. Action can be taken only on majority vote. If the majority is duly secured, five supervisors are elected, three by occupants of lands within the district and two by the central committee. These supervisors are authorized to draw up a land-use program for the entire district. The proposed program, in turn, must be approved by a majority of land occupants within the district. Modifications and changes are allowable but, once accepted, agreements becoming binding on all concerned.

Occupants of land continue to hold full title to lands and elemental right of lease and ownership. But community interests, as decided by majority vote, take precedence over the individual's interests. Thus, in actual operation, the conservation district becomes a reinstatement of the open-field commune of earlier days.

When duly organized, the district is a combination of an agrarian manor, a new political unit and, to a measure, a co-operative association.

These implications are tremendous. Working patterns are not yet entirely clear; an enormous amount of legal bush slashing still waits to be done. From a standpoint of needed materials and labor these enterprises in soilsaving are usually expensive. Financing provisions are variable and far from satisfactory. Landowners or tenants who benefit, or hope to benefit, from conservation measures must still meet the lion's share of the expense, though state and federal funds now help with the work.

During 1937 the "Standard Act," as rubber-stamped by the Department of Agriculture, was adopted by twenty-two states. In two others, Ohio and Texas, its passage was blocked only by governor's veto. Since 1937 twenty-three more states have enacted soil conservation legislation of one kind or another, though statutes of this later group, which includes Arkansas, Colorado, Florida, Georgia, Illinois, Indiana, Kansas, Maryland, Michigan, Minnesota, Nebraska, Nevada, New Jersey, New Mexico, North Carolina, North Dakota, Oklahoma, Pennsylvania, South Dakota, Utah, Wisconsin, and Montana, have not thus far met with the complete approval of the pundits of the Department of Agriculture.

But the march has clearly begun. Jacks and Whyte² summarize their estimates of the probable course of this newer American temper as follows:

"There is every prospect that soil conservation districts will become a common and characteristic feature of land tenure on the eroded soils which cover the greater part of the United States. It depends on whether they succeed in their prime object of permanently checking erosion and restoring soil fertility.

"It is significant, however, that the conception of soil conservation districts involves an apparent reversal of the Nation's 'reaction against the remnant of medieval land tenure.' It suggests that men are once more becoming ready to submit to the dictates of a still unconquered Nature, and, if necessary, to force submission from their recalcitrant or too self-seeking fellows. In some form or other, community farming, regulated so as to enrich the soil before the individual land occupier has figured prominently in the early stages of all successful civilizations. There seems no reason to assume that

that stage can be dispensed with under the trying conditions to which modern agricultural technique subjects virgin land."

Unfortunately most of our legislative bodies are distinctly urban-minded, and unfortunately it is difficult to legislate men and land into a happy equilibrium. But today's soil conservation legislation is comparatively flexible, for the most part, and eligible for the numerous revisions which are almost certain to be needed as time and work continue.

In the Western world, sparsely populated nations such as Canada, Brazil, and the Argentine have comparatively little to worry about as regards soil erosion. Where rich land is still plentiful, worn land can easily be abandoned and the more destructive types of erosion postponed, if not avoided. Obviously, postponement of the rigors of a given malady is by no means identical with a cure or a solution of that malady. Obviously, too, profits and fortunes of the nineteenth century, and indeed of the first third of the twentieth, were built to an appalling extent upon spoliation of soil. The boom and depression following the first World War accelerated tremendously man's destruction of the earth's crust. Men ravished the soil in order to profit from high prices for crops. Men continued to ravish the soil in order to live from excessively low prices for crops.

Meanwhile we Americans have become aware that Europe cannot give back the fertility it has bought and otherwise taken from the topsoil of the United States, that soil fertility is far easier to sell than it is to buy. Today the carefree sellout of earth fertility seems pretty well over. The international orgy of "nationalism" which flowered and fruited so generally during the 1930's has seen to that. Perhaps if the dreams of Woodrow Wilson could have flowered into reality—if the Versailles Treaty could have been honorable and the League of Nations a success—the exploitation of North American soil and of African, Australian, and other New World lands would have proceeded without abatement.

But history would not have it so. Throughout the world nations today seek the goal of sufficiency within home boundaries—in frantic preparation for bigger and bloodier wars. Cultured Europe has been spending her cash for bombs and death machines, and straining her aging soils to the breaking point so that as men fight they may occasionally eat.

Jacks and Whyte summarize the situation in another way:³

"The Old World cannot give back the fertility it has taken from the New, but it is being compelled to live on its husbanded resources until such time as the New World is restored to vitality and can take over and revive the flickering torch of civilization. No longer will soil fertility be traded across the seas for civilization; civilization will migrate to build up soil fertility; for a staple civilization enriches the earth where it flourishes to a far greater extent than wild Nature can. But the soil demands for its security a dense and settled cover of humanity to replace the plants which men destroy. . . . A farmer tied to his land by necessity or affection keeps a better guard over the soil than the flitting tenant. The denser the plans grow, the keener and more merciless the struggle for existence between them, the less power have wind and water to tear away the soil beneath. The half-starved peasants of Japan know better how to preserve their soils than do the great land-owners of America and Australia."

The above quotation is worth several readings. This onlooker assentingly points out that the present average density of the better farm lands of the United States, around thirty people per square mile, makes soilsaving infinitely more feasible today than it was a century ago when average populations of the same lands were about two people to the mile. The obvious and long-proved soilsaving advantages of intensive cultivation and heavy rural population throws into garish relief one of the more destructive paradoxes of the New Deal for Agriculture.

Time and time again the New Planners in Swivel Chairs have indulged in the platitude that too many of our people are already tilling the land. Fortunately for the New Deal intelligence quotient, it is to be recorded that such muddleheaded thinking is not the exclusive affliction of Mr. Roosevelt's Planners. Long before them, the credo was a chestnut of the Hoover administration and the Harding-Coolidge era.

Back in the early thirties I tried to record and evaluate the rather frantic back-to-the-land move which followed the first major depression and preceded the second and third. For suggesting that meager subsistence farming is usually preferable to bread-line servitude in the cities, I was all but scalped by Serious Thinkers south of New York's Fourteenth Street, and profusely chastised by maestros of

various Federal Bureaus of Economics. "Viper," they said; "we already have too many people on the farms. That's right because we learned it at Cornell and taught it at Columbia University, the Power House of Knowledge."

While slinking disgraced into the solitudes of my Arkansas countryside I pondered upon the overwhelming testimony of crop statistics and soil surveys that throughout the United States at large soil destruction by erosion has been most ruinous in those sections where land abandonment is most frequent; that in terms of soil assets he who has least is being most rapidly robbed of the little which he has.

Once the sod is broken, overpopulation of land is not nearly so destructive of soil as underpopulation, and even temporary tenancy is vastly better for the soil than no tenure at all. The teen-age membership of the 4-H Club of Three Cheers, Iowa, can readily affirm that our ruining era of erosion prevalent since 1910 has followed the wake of extensive farm abandonment; that the extinction of some three million farms since 1900 has furrowed and rutted the face of this nation with uncensused millions of gullies; that once the sod is gone, gully erosion, sheet erosion, and wind erosion are most severe upon bare earth which has been abandoned by the plow.

The point is confirmed by the following table plucked from the inner sanctum of the United States Department of Agriculture:⁴

SHELBY LOAM. SLOPE 90.75 FEET. DEGREE OF SLOPE 3.68 PER CENT

<i>Cropping System or Treatment</i>	<i>Average Annual Erosion in Tons per Acres</i>	<i>Percentage of Total Rainfall Running off the Land</i>
Bare without crop	41.0	30
Continuous corn	19.7	29
Continuous wheat	10.1	23
Rotation—corn, wheat, clover	2.7	14

And again quoting Jacks and Whyte: "A dense population up to the limit which the land can support is, indeed, the best insurance against the forces causing erosion." To be sure, absolute and specific definition of the phrase "up to the limit which the land

can support" is an entangling and difficult task. Our Department of Agriculture is still unfortunately vague in defining such terms as land's capacity to carry population, or indeed the treacherous labels of "marginal" or "submarginal" lands.

Any side-street radish peddler knows that land which is profitable to one farmer can well be submarginal to another, and that soil's capacity to support people is most heavily dependent upon the husbandry of the people who seek to be supported. But if there is any one absolute certainty in the vast anthology of soil history it is that the life of cultivated land is best assured by the sweat and devotion of a plenteous population that calls it home; that headlong retreat from lands, regardless of academic credos, is the surest road to ruin for the land.

Presumably all agrarian life has its eventual mortality of topsoil. The lands of China, India, and Persia, even though heavily populated, support this presumption. But the mortal plague now ravishing the soils of the United States is not inevitable. It is highly synthetic, arising from causes and motivations which in the main are cowardly, stupid, and otherwise deplorable.

We need more farmers, not fewer, upon poor lands still capable of redemption. Each farmer who withdraws and ceases to fight for the life of his land puts upon his neighbor a still greater burden of despair. Actually productive soil is very much alive. Actually it reacts violently and promptly to the economic and social behavior of man. And the day is finally done when man can stand alone with or against the soil from which he takes his life or can shape his use of land to his own personal convenience. To survive, men must fight erosion in groups.

When a farmer undertakes to protect his land against ruin by erosion he seeks improved harvest, greater security, and other benefits. He knows that the total of benefits derivable from conserving the soil may not immediately repay him for the cost of his personal war against erosion. And he cannot help knowing that while he works to protect himself and his own property he is protecting also the persons and properties of his neighbors. For he is reducing the hazard of earth washing or drifting on his neighbor's fields, and he is improving the highly important subterranean storage of water. He has good grounds for claiming that

his neighbor should meet part of his expense in conserving soil on adjacent lands. A neighbor's failure to co-operate may invalidate all the conservation work done by one farmer. This community co-operation against erosion rises as an indispensable practice of today, and almost certainly of tomorrow.

And community co-operation is a husbandry of today and tomorrow. It is democracy at an essential work. Therefore, there is a distinct possibility that newly formulated soil conservation districts may become our basic governments of tomorrow.

Three states, Montana and the two Dakotas, have enacted laws establishing state grazing associations, to the end of saving the remaining native grasses on unfenced ranges from ruin by overgrazing. The states and the federal government continue to purchase for return to public domain spots and pockets of land whose abandonment or misuse would drastically increase the hazards of erosion. Rural zoning laws, of the sort pioneered by Wisconsin, are steadily gaining momentum. Meanwhile, as rural Americans struggle to save the rich topsoil of a nation, agrarian accent continues to shift from the individual to the commune.

All this is barefaced admission of changing American philosophy. Our men of earth have now learned that soil is not inexhaustible; that the individual's good is not invariably the common good; that world markets are definitely contracting rather than expanding; that man does not master nature.

Thus is born a new and distinctive pattern of American agriculture. We see but vaguely the seeds and rootlets of its beginning, but there is reason to be thankful for even this slender thread of agrarian forecast. Most definitely it is a thread of hope.

This nation's first striving to hold a competent reserve of soil for the agriculture of tomorrow proves a cautious, and somewhat groping, beginning. In comparison with parched Australia, war-smeared Europe, and fatalistic Africa it is an eminent beginning.

In agricultural planning Soviet Russia is our one formidable competitor. But the Arm and Sickle Experiment seems to be a pastoral with sledge hammer and firing squad as both foreground and background.

The Soviet plan is grandiloquent of conception. It is a matter of soil control via water control. By means of canals, locks, dikes, sluiceways, and commissariats it would link together the major

riverways of the great steppes into one gigantic interlocking authority. By the turn of a key or the lifting of a switch bar, three million square miles of watershed could be used to fertilize and populate the steppes, or converted into electric power, or used to beat back advancing deserts or to move multitudinous legions of defending armies.

According to Soviet plans, "flood and drought will be disciplinary measures which Man and not Nature" will exercise on those who do not toe the line. Line-toeing is ominously accented in the stupendous Soviet concept. But technical and administrative details remain a deep Red mystery. The scheme was to have been completed as part of the fourth Five-Year Plan. The last official Soviet news releases on the subject were dated March 7, 1933.

At that time the Soviet "Academy of Science," assembled at Moscow with much ceremony and libation, watched the Red army parade for several hours, then announced to a groggy world that the gigantic conservation plan not only would control erosion throughout most of Russia, but would direct the water requirements of farms and farmers, of power stations, industries, and inland navigation; further, it would control the lives and destinies of fishes and insects and birds throughout the Soviet Union.

In all it sounded like a romantic vodka dream. It will be recalled that this titanic announcement followed closely the declamatory incubation of the Greenwich Village pushball known as technocracy. While Howard Scott and his bizarre associates were thwacking the jaded nerves of a depression-worn America with schemes for an "energy survey" of the Western Hemisphere with suggested currencies of watts and ergs, and with plans for lowering the level of the Atlantic Ocean by pumping it into the Pacific, Herr Stalin and his publicity brigades appeared to be staging a competitive publicity war. As the amiable insanity of technocracy mounted to higher crescendos, so also did this horrendous plan for simultaneous state mastery of soil, yeomen, birds, fishes, waterways, black widow spiders, and little green lizards of the U.S.S.R.

As a curious onlooker, I personally have tried in vain to determine the actual results of this Soviet plan of plans. I have sought official releases from Moscow. None have been given out. I have hounded the Soviet consulate in New York and the Soviet legation in Washington for contemporary news of the progress of this

colossal super of a soilsaving plan. The U.S.S.R. has now ceased to announce (and Technocracy, Inc., alas! has almost ceased to compete).

Here is the best report now available from the realms of Enlightened Collectivism: "The Russian plan will most probably not be effected during the present century. Perhaps it will never be attempted as a whole, but only in isolated and strategic parts. . . . We can only guess how the great triumph will be achieved."

Maybe Louis Fischer or Maurice Hindus or the editorial staff of the *Nation* can guess. Personally again, I am unable to guess. I can't even sit alone in a hotel room and imagine.

However, I can imagine that this new era of soil conservation in the United States holds implications second to none in the history of agriculture. Admittedly, soil conservation tends to be a stabilizer, not an abolisher of rural poverty. The driving, stubborn efforts to conserve the fertility of soil inevitably restrict and limit actual production of that soil. The expenditures of labor and materials required for thwarting or retarding land ruin by erosion are frequently of no immediate value in growing crops.

Therefore, the work of soilsaving cannot be translated into immediate and spendable dollars and cents. Its economy is long-term. Its attainment will tend to have the immediate effect of holding farm incomes to present levels, if not actually reducing them. It cannot be an adventure in mortgage lifting and, though it may tend to stabilize and increase average terms of tenancy, it cannot solve all problems of tenancy. It probably will not materially increase the census of farm ownership. Most likely it will tend to lower farm wages, rather than to raise them. In the long run it will unquestionably improve the tax base, but it cannot be expected to register any immediate increase in the capacity of cultivated land to produce taxes.

Continuation of soil conservation, together with improvement of state conservation districts, will probably tend to increase average yields per acre. But required overhead and man-hours of labor will be considerably increased. We can reasonably expect a continuing increase in the livestock holdings of the United States. Present-day theory and practice of soil conservation heavily accent the planting of grasses and legumes, and the rapid increase of acreage in grass calls for more livestock to consume that grass.

Thus it seems all but inevitable that continuation of concerted soil conservation will increase, for example, the numbers of milk cattle—we have scarcely begun to measure the real ability of this nation to consume dairy products—and of sheep—since wool imports continue to fail. Both as part of “conservation programs” and as a move toward subsistence, as motivated by an ever-sterner economy, diversification and rotation of crops will most probably become still more commonly accepted as orthodox farm practice. This means, incidentally, that the top-heavy single-crop systems are on their way out, though the exits are likely to be painful and provocative of real distress.

The hoped-for growth and flowering of soil conservation districts should eventually act to reduce rural migration, although the first effects will probably be to increase such migration temporarily as indigents are forced out of the agricultural running. Almost certainly concerted efforts at soil conservation will limit, and no doubt reduce, the tilled acreage of the United States. It should serve to hold “average farms” to present areas of from 100 to 150 acres each.

But the development of communes for soil conservation is likely to force hundreds of thousands of small farms and “tenant patches” to merge into larger units or pass finally out of operation. Extensive rotation of crops and accent upon grasses and legumes act to thwart development of “garden farms” or of any other small-acreage farms. Even where rainfall is plentiful soil conservation practice directs that 60 to 80 acres must be regarded as a minimum farm unit.

It is to be hoped that soil conservation efforts will gradually modify the appalling contrast between earnings of the “best” and “worst” farms of the nation. But chances are that the social and financial effectiveness of soil conservation will be gradual. For restoration of productive earth is the slowest and hardest job that great numbers of our people have yet undertaken in common. There are bound to be backsliding and changes of heart. It is easy to take handouts of government bounties of the slovenly sort given so carelessly during the earlier stages of the Agricultural Adjustment Administration. But to satisfy all terms of rigid supervision and to build together a solvent investment by means of erosion control is anything but easy. It is difficult to predict just what political entities soil conservation districts may ultimately

assume. But undeniably men are being bound together in new community, which suggests that the rural political voice may be still further amplified.

Soilsaving is a complex game, and a game of chance. Its victory, or even partial victory, presupposes that nationalism will continue as a world trend in trading; that there will be no more abrupt plunges into periods of loud prosperity. If such a time comes, the stubborn form of Profit Motive will once more arise to command use of land, and the hope or the reality of plump and prompt profits will again exhort that men cease to conserve topsoil and again ravish and plunder the good earth—tearing from it the most wealth in the least time.

In the same cautious breath it may be suggested that a continuation of nationalism in trade is likewise highly beneficial to hopes for concerted efforts to conserve our soils. In terms of agriculture and topsoil, it would seem that our land might reasonably benefit from importation of minor percentages of soil-ruining crops such as flax, tobacco, and sugar. However, indisputable statistics of the past prove that export of huge tonnages of United States crops, as sponsored by commercial anarchy of earlier decades, has brought ruin to tens of millions of acres of once-fertile farm lands. From a standpoint of conserving soils, it is not easy to compute the ideal volume of crop exports. It seems comparatively certain that the 1905-1920 export level of \$3,000,000,000 worth of farm harvests per year was far too high for the enduring good of our soil. During the depressed thirties, when falling living standards and acute nationalism were trade trends throughout the world, it is clearly apparent that our exports of farm crops were too low for the good of soil conservation.

But the belief seems reasonable that, as (and if) concerted conservation of soil gains headway in the United States, desirable totals of crop exports might be gradually raised during years to come. This depends upon factors which no man or administration can surely control.

From all this labyrinth of agrarian contradiction there arises the apparent suggestion that conservation of soil must be built upon an extremely delicate balance of agrarian poverty and prosperity. Saving the fertility of land is not a feat for rural starvelings; neither is it a bonanza for the rich.

2

RE-ENTER THE RURAL MIND

A FAMOUS economist was speaking to a businessman's club on the subject of farm buying power. He dwelt long and earnestly upon the fact that the farm mind is hard to understand, especially hard for the townsman of commerce or profession to understand. The audience agreed in sympathetic gravity. Present were 116 townsmen. Of these 96 had been born and raised on farms.

This paradoxical episode illustrates a current dilemma. Sons and daughters of a farming race, shareholders in a government of agrarian origin, members of churches and cities which have risen largely from agrarian roots, we are only beginning to realize that the United States is now out of step with the deliberate saunter of rural life.

During the past fifteen years, American farm areas have been targets for a colossal bombardment of nonrural doctrines. Tens of thousands of presses have busied themselves grinding out exhortations that the farmer buy more and meet the bill with increased production of crops. Torrents of industrial expansiveness undertook to change the farmer from his bucolic place as producer of crops to the prized show pen of blue-ribbon consumer. High-pressure salesmanship undertook to crowd the farm with every imaginable commercial gadget, from lightning rods to automatic pancake mixers mounted on casters. It was only with farm co-operation that the United States, with perhaps 6 per cent of the world's population, managed for a time to consume 50 per cent of the world's total of manufactured goods.

Yet the agrarian goose, with all the other requisitions on its golden eggs, was expected to yield to the city not only its productive

wealth, but also its youth. We have glorified the Abe Lincoln tradition for leaving the farm to seek fame and fortune in the city. Accordingly, our Abe Lincolns have gone forth from the land in a never-ending procession, enriching the blood streams of cities and city professions, but at the same time relentlessly shearing farm population, leaving the farm lands with an unreasonably high percentage of culls and an unreasonably low proportion of talented youth.

Moreover, the common-school system has been inclined to neglect the vocational importance of farming. By and large, country schools grew to be minor editions of town schools rather than institutions indigenous to the farming communities they were endowed to serve. Yet, inappropriate as these schools have often been, they left their mark upon agricultural areas at least to the extent that the farm mind of today is passably literate, with a few regional exceptions.

Numerous so-called farmers' unions, leagues, and associations, for the most part organized and directed by professional politicians or politically backed organizers, have added denseness to the smoke screen that has so long obscured the real rural mind. In the main, these organizations have avoided real farm opinion, partly because astonishingly few of the organizers have themselves been farmers. The productive technique of the swivel chair is vastly different from that of the turning plow. The great majority of farm party leaders have fallen and continue to fall under the heading of part-time lobbyists.

But the farm mind seems to have survived these years of ulterior goading and exploitation. Today the rural mind re-enters the national scene with clarity and emphasis, as the nation at large executes an about-face in its popular estimate of farms and farming. The federal government launches ambitious programs of planned agriculture, for social justice in the form of acceptable living standards for all rather than vast wealth for a few. And practically any chamber of commerce secretary will again tell us that it is the farm dollar that eventually turns the wheels of commerce, and almost any business-school sophomore will echo this truism.

The fact that a tangible weight of agrarian opinion survived through the greatest of all bootstrap-lifting marathons, through a decade of inflated opinions and conflicting motives, demonstrates a

noble vitality. I see the reappearing rural mind as a gyroscope and steering mechanism that promises to endure, even after our knights of high finance, watered stocks, and polished conference tables have gone forth in search of likelier pickings—in South America, the U.S.S.R., or perhaps in a well-greased, well-serviced Elysium.

We are well into a new landward era. Just as the city drifter looks to the land as a saving refuge, so does the American public at large look forward with a new eagerness to know and to understand. As an industry, agriculture is still faced with desperately grave problems. But as a way of living, agriculture can be restored to a place of solvency and dignity.

Today the rural mind, cogitative, fatalistic, sometimes even to bitterness, begins to retake its earlier place as the dominant American mind—dominant not so much through wealth as through sheer weight of numbers and capacity to yield tangible subsistence.

The reappearance is heartening. It again presents the farmer as a social and economic entity. It restores the age-tested belief that productive land must be a homestead and a workshop—not an investment bank or an arena for highhanded speculation. It presents a renewed and mighty resource in equilibrium. The exclamatory uncertainties of first pioneering have abated, now that actual frontiers have passed westward and tumbled into the Pacific. The "habitual anarchy" of increased production of crops is dying an altogether bucolic death.

The farm mind of today meets a great positive test through its practical willingness to accept self-subsistence as a first goal. It offers a great negative test, proving that the city opinion cannot be transferred bodily to the land with results that are satisfactory, to either farm living or city living.

The era that separated the Armistice from the collapse of Wall Street was definitely urban—an age of city dominance and increase, of city thought, of city commerce and professional life. It was an era of dazzling changes, wherein towns and cities, traditional headquarters of change—changing industries, jobs, apartments, wives, values and motives—have emphatically proved that change, progress, security, and contentment are not identical with, and producible by, the mere fact of change.

About one-fourth of our people live on farms. Another fourth live in small towns or villages that are primarily clearing centers

for farms. During the uproar of the twenties, city-minded helmsmanship gave sorry enough guidance to this great rural America. Although urban America proved that it could make more noise than rural America, it did not prove that it could replace the rural mind or co-ordinate urban and rural values and interests.

During almost all the prosperous-on-paper twenties, the farm barometer was distinctly cloudy. Crop prices limped painfully behind the front of commodity prices. Acreages increased, exports waned, farm mortgage debts climbed from \$5,000,000,000 to \$10,000,000,000 as farm income descended by inverse ratio.

In 1928 the index of recreations (expenditures for travel, reading, play, theatrical and motion-picture entertainment, etc., and long accepted as one of the surest gauges of prosperity) showed that, whereas the city laborer was spending around 15 per cent of his income for recreation, farmers, even in the intensely fertile Corn Belt, were spending less than 5 per cent.

Urban philosophy of profits was out of step with rural necessity for subsistence. Urban increase in industrial production and sales turnover could balance itself only through unlimited and frenzied expansion of tilled acreage. Yet the proved history of American agriculture could only repeat that farming is first of all a way of life rather than a means toward competitive profits; that from the first start of pioneering, American agriculture has rested primarily upon a foundation of self-subsistence.

From a rural standpoint, the city-minded twenties were out of step with farming. From an urban vantage, farming was out of step with them. In any case the cadence and rhythm of distribution were disrupted, and the city mind proved that it could neither replace nor obliterate the country mind. Now we see that the rural mind stays on, invincible as the farming trade and the crop-giving combination of rain and earth and sunlight.

From a standpoint of environment and lineage, this rural mind is long tested, and is American to the fullest connotation of the word.

It is essentially a reflective mind. The labor and hurry of the farming year usually end with the actual crop-making season. The rest of the year offers much idle time, rarest of modern-day luxuries. It does not necessarily follow that the countryman spends all his

Iris Woolcock

LANDSCAPE





Iris Woolcock

COUNTRY FIREPLACES

idle hours in reflection and meditation, but it does follow that the resource of leisure time, together with the staple, distinctive pattern of farm life, allows the rural mind an innate sway of opinion.

The farm mind keeps its steadfast realism. It has not lost the weave of its original pattern. It knows its own life with a powerful and direct intimacy. Its primary interests stay tethered to the begetting processes of earth and animals, of seeding and growth, of harvest and death. These precepts are definitely beyond the platitudes of high finance or the charging contradictions of city life.

Now that great wealth is beyond the scope of agricultural probability, the farm mind is subjected to no compelling reason for "faking" a position or an aim. Therefore, the rural mind re-enters the national scene with enduring breadth and new pertinency as the essential profession of agriculture wakens to new solvency and stability; as a fantastic era of predatory greed yields reluctantly to a realistic acceptance of the age-old grail of social justice. Therefore, the rural mind reshapes itself to a time-tested pattern, a re-awakened national voice.

The rural mind is possessed of a certain maturity of opinion, a result perhaps of its seasoning in actuality, of knowing life with a tremendous intimacy. A disciple of the fierce experiences of Dame Nature, it witnesses with firsthand intimacy the processes and urges of procreation, the courses of growth, seeding, harvest, and death. The elemental turns of the life about him fall within the scope of the countryman's intimate and feeling knowledge.

Thus the actual range of his knowledge is surprisingly broad in comparison with that of the great majority of professionals or urbanists. The ruralist must meet life in many capacities and grades. In winter he is likely to be a woodcutter, a wagoner, a hunter or trapper, a home craftsman—a cobbler, auto mechanic, a cabinet worker or wheelwright, a fence builder. With the coming of spring he must turn plowman and planter. As his crops grow he must make sundry changes in tools and the application of skill. The manipulation of a light cultivator is vastly different from the handling of a heavy plow. Building a wheat cock involves a complicated technique, totally different from that of shocking corn. Hay hauling is of itself a skilled craft, as is cornhusking. Then when

the harvest has been made he must turn salesman and bargainer.

So his years go, with their rounding series of requisite skills. The chances are that he must know something of the ways of court, of legal trends, of taxation, of the ways of road and school building. His wife must needs be cook, nursemaid, herb mistress, fruit canner, governess, dressmaker, washwoman, milkmaid, and frequently a field worker.

Rural thought holds but a working minimum of the artificial. The yeoman has little hand in the spoils of unearned increment, commercial conquest, or business strategy. His opinion cannot be shaped by the enticements of duration or the permanence of accomplishment. For him life comes and goes with the seasons. His interlude of production begins and ends with the months of growing. He plows his land and lays it off into planting rows; then he plants, seeds, and cultivates and harvests his crops. The cleanest of furrows will normally not outlast a change of the moon. Arrow-straight corn rows can endure but a single season. A field kept immaculately clean of weeds and sprouts will next season conceive new weeds and new sprouts in a hoe-defying multitude. When drought comes, young crops wither and parch. There can be no denying or altering the case. As a first child of the great mother, the countryman has absorbed plenty of her giving of doubt and contradiction. Rural beliefs still are more than mere by-products of punch clocks and balance sheets and cultural and economic ascensions. Usually the rural citizen senses and endures. He reckons that, if the ways of nature are at times ruthless, they are nevertheless inevitable.

Life is his elemental interest. Unlike the futurity seekers who are ever prone to reach for the sun only to find themselves clasping dimes, the yeoman may rest close upon the nurturing soil which takes his sweat and labor, gives him victuals and support, and by the way of a final swap, takes his body to augment its fertility.

The farm population of the United States continues to grow; so do the implications of rural poverty. Systems of agricultural economics, duly sheltered by college walls or government bureaucracies, have built up a rather specific myth of farm living standards: that the American farmer has the inalienable right to own a seven-room house with electricity and steam heat; that his just accouter-

ments include bathtubs and automobiles and traction machinery and college educations for his offspring—in all to keep apace with the high-medium level of town living—in prosperous times.

Despite such treatises, study of farm incomes shows that the American land is not generous in its giving of cash and that it has never been generous over any sustained period of time.

During past uproars of "prosperity," farm incomes have been outrageously exaggerated. Wall Street's bubble year, 1929, saw the United States with about 6,000,000 farms under cultivation. Of these, 400,000, or about 6.6 per cent, raised less than \$250 worth of products, including a market value on products consumed at home; 518,000, or 8.6 per cent, produced \$250 to \$399 worth of products; 766,000, or 12.7 per cent, produced \$400 to \$599; 1,246,000, or 21.8 per cent, produced \$600 to \$999; and 838,000, or 15.6 per cent, produced \$1,000 to \$1,499.

Even in the heyday of high finance about half of all American farms were producing crop incomes of less than \$1,000 a year; less than 2 per cent yielded \$7,500 or over; at least 15 per cent stayed within the \$1,500-\$2,000 bracket, and even a medium income range remained in the minority. Now it becomes all the more apparent that farming as a way and means of life, rather than of amassing wealth, is definitely not a new phenomenon. The evidence still holds that the worth of American agriculture can never be gauged wholly by the counts of its cash drawers; further, that generous soil is not necessarily destined to build up generous bank accounts.

Subsistence farming is not new, in terms of either agricultural economics or agrarian progress. For the past half century every farm census has classified at least one-third of our farming population as subsistence farmers, in contrast to farmers occupied in commercial agricultural production. And since 1925 city people and townsmen have been yielding to an increasing urge to acquire suburban farms and garden lands where they can live at least a semicountry life and at the same time keep city jobs and connections in professions, trades, and industries.

Part of our almost unanimous vision of the future is that of better development of "decentralization." As this move continues to progress with the advent of shorter circuits in distribution,

smaller branch factories, better small machines that make it possible for many industries to operate in smaller units, another white hope looms on the horizon of probability—the union of farm and factory work: gardens and small acreage farms whereon the factory worker or the homecraftsman or the shopkeeper can make profitable use of spare time to the end of increasing his income and his security.

This is the idea that is being pursued by the Subsistence Homestead adventures. There are other goals, some of which have been varyingly realized by nations of Europe. One is the assembly under public ownership of large blocks of land suitable for forestation and the settling on them of families provided with some five or ten acres of the best land for cultivation and with a guarantee of a hundred days' work a year on or in connection with the growing timber. Close kindred is the prevalent urge for more presentable federal game reserves. The National Game Commission asks that some 17,000,000 acres of abandoned farm lands be given over to game breeding and protection centers, and that they be tended and improved either by subsistence homesteaders or by town unemployed who would otherwise be public wards. Obviously there are many similar possibilities, which wait to be co-ordinated and supported by suitable administrative measures.

Replanning of farms and government encouragement for land-taking as a way toward partial subsistence for townsmen no longer needed by towns is both a logical and a humanitarian development of the nation-wide desire for farms and for productive earth. The fine old maxim that civilization begins and ends with the plow assumes a new relevance.

Our first pioneering was too individualistic a process to allow consistency or thoroughness in land-taking. Poor lands and rough lands, hill country, swamps, and sterile plateaus were taken carelessly and as carelessly abandoned for greener valleys to the west or south. The line of frontiers moved on to the Pacific, leaving a wake extravagantly uneven. Then the decades of Victoria and industrialism saw the rise and multiplication of cities. Towns sprang from babyhood into hardened manhood, rambunctious and greedy, while farming realms were left to wait and wane in stoic silence,

yielding a never-ending toll of their people, particularly of young men and women, to the cities.

Now that the allurements of industrialism have somewhat cooled, the American nation looks again toward the old and sure refuge of earth, realizing that the economics of farming are vastly more than textbook or pink-tea credos; that the tie between the yeoman and the earth that he tills is capable of showing wondrous strength. Like marriage or childbearing, land tillage depends considerably upon economic considerations; further, like marriage or childbearing, land tillage holds a depth and solvency which no amount of economic theory can either obliterate or master. Earth from which any able-bodied man or woman can fight at least a bare living holds mighty advantage over the most formidable logic of theory.

Industrial America is still too much inclined to regard men as tools. When labor is needed, labor markets are good. When not needed, jobs close and dole lines open. Men are dropped and abandoned for reasons highly complex and ambiguous, reasons whereof they have little knowledge or control.

But an agrarian who can raise his own food, mend his own clothes, and perpetuate his own shelter is not without economic strength or social solvency. An arched eyebrow or a furrowed forehead cannot turn him out jobless and homeless.

The processes of land-taking have woven themselves into the very fiber of our nation. As Frederick J. Turner¹ pointed out: "The effective force behind American democracy is the presence of practically free land into which men may escape from the oppressions or inequalities which burdened them in the older settlements. . . . American democracy was born of no theorist's dream. It was not carried on the *Susan Constant* to Virginia nor on the *Mayflower* to Plymouth. It comes out of the American forest and it gains new strength each time it touches a new frontier."

And, speaking of the civic worth of farmers, it is still seasonal to recall Thomas Jefferson's² saying:

"Cultivators of earth make the best citizens. They are the most vigorous, the most virtuous, and the most independent. They are tied to their country and wedded to its liberty and interests with the most lasting bonds. As long, therefore, as they can find employment in that line, I would not counsel them to be mariners or artisans or anything else."

Vital statistics of rural America give encouraging testimony of the sound fecundity of the farm. Evidence offered by birth, death, and marriage rates is distinctly in favor of rural areas. Rural America is holding up magnificently in the matter of marriage and birth. About 67 per cent of all farm women fifteen years of age and over are married; whereas the country's average is only 58.5 per cent. According to the latest federal census, to every 100 married, widowed, or divorced woman, fifteen years old and over, there are 36.4 children under five years of age. In rural America the latter figure rises to 45.5. Furthermore, states with the largest farm population show the most rapid increase in native-born population.

The present century has seen tremendous increase in farm tax. However, the weight of rural taxation rests most heavily upon productive land and not upon the capital of that land. Considered in its true definition, farm capital consists of buildings, livestock, growing crops, tools and machinery, household equipment, all of which are getting a splendid break in the matter of tax levies. Taking the nation as a whole, about 85 per cent of rural taxation appears to be falling directly upon the land, which is perhaps fortunate. The user of land must remember, therefore, that the price of land is actually written in terms of what the land can produce. The price the land-taker pays for his land, whether it be in labor, rent, or outright purchase, must include taxes, and the owner gets only what is left of ground rent—if any.

This becomes a re-enactment of Ricardo's doctrine of rent—that rent is the excess value of any land over that of the poorest neighboring land in common use. Therefore, heavier taxes on land will, and do, cause a vast acreage of good land to be thrown upon the market at little or no price except payment of taxes by those who desire earth to till. The tiller's profit is generally nonexistent. His compensation now must take the form of a base wage.

During the roaring twenties we watched the total of farm debt grow by billions as crop prices sagged below the possible minimum of crop production costs. We have watched the propagation of unnatural and unwarranted systems of land values.

"Good farm land," they told us, "is worth from \$100 to \$200 an acre."

For what? Certainly not for growing crops. No decade's average

of crop prices could convincingly justify such a price. For loan bases, then, for speculation and investment profits. That has been the answer. For the investor farm land stays a solvent institution so long as the sweat and muscle of its tiller can produce interest and "justify" renewals of principal. Credit usance of the Harding-Coolidge-Hoover decade has given us a costly reminder that farm land is a workshop and not an investment bank; that land is a tool for production.

The first Roosevelt administration recognized two ways of saving the nation's yeomanry: (1) by restoring farm purchasing power through a forced revival of the 1909-1914 crop price level; (2) through capital adjustment and interest limitation of the \$12,000,000,000 burden of farm debt current in 1933.

The present farm debt gives gigantic and numbing proof of our misevaluation of land. Mortgages of serious consequence now encumber 40 per cent of the nation's farms. Hundreds of thousands of farmers who were proprietors ten years ago are now debt-ridden tenants. While the value of crops waned from \$12,000,000,000 in 1925 to less than \$5,000,000,000 in 1932 and while the estimate of the average farm income waned from \$2,600 gross in 1925 to \$800 gross in 1932, farm indebtedness remained near its high peak of \$12,000,000,000, with the \$9,000,000,000 impediment of mortgages reduced only slightly, and that largely by foreclosures. Today American agriculture carries more obligations than ever before. It is expected to give livelihoods to our 33,000,000 rural people; give transient and part-time employment to perhaps 3,000,000 town workers, and profit base to millions of distributors.

In contrast to this muddled and rather cold-blooded quandary of misevaluations of farm land, the farm "relief" plans of the Roosevelt administration have shown considerable clear thinking and much human kindness. The New Deal's beginning efforts at re-evaluation of land are directed backwards—to the period between July, 1909, and August, 1914, which is commonly regarded as the most solvent era in the history of American farming. Domestic allotment seeks a forced revival of the crop price range and general ratios of those years in the belief that they were dependable and sound.

Even in those bonny days, rural America, although in fair financial health, was not waxing fat. Yet the average farm income was

between \$200 and \$300 a year higher than it is at present, the total of farm debt about \$5,000,000,000 instead of \$12,000,000,000; the interest obligations less than \$400,000,000 yearly as compared with the present \$900,000,000; farm taxes averaged 35 to 40 per cent lower than at present, while the actual purchasing power of the farm dollar as applied to shoes, clothing, and household goods was about half again as great.

Wholesale mechanization of American farming was instituted during the first World War, made possible through exuberant inflation of currency and credit and by rosy opportunity for agriculture to join with industry in supplying materials to a war-ridden and temporarily indigent world. Agriculture was reshaped to the proposition that increased acreage and increased production are identical with greater profits.

Having once taken on a veneer of industrialism, farming was loath to lose it. Machine farming is comparatively quick and easy and apropos of rural living standards as cherished by the national advertisers. It has provided an interesting show, though it has not been proved an agrarian cure-all. Machines or no machines, distribution costs of our farm products have hung doggedly at levels of the first World War.

Since 1918 rudimentary economics of agriculture have taken more account of national boundaries. When fighting Europe lost 50,000,000 acres of battlefields, we promptly added about 40,000,000 acres to our domain of farms and threw American agriculture into "high gear." We have continued to produce crops for a world market, just as if there was one, a fact which has beridden us with such bucolic realities as the rotted fruit of California, the undug potatoes of Minnesota, the burnt corn of Iowa, the unmoved cotton of Mississippi, and the failure of 8,000 rural banks.

Now a plunging national administration continues to mix tonics for a sorely ailing agriculture, not bothering to deny that its proposed doctoring holds unnumbered possibilities for leakage and incompetency. Henry A. Wallace, Secretary of Agriculture, says:

"We have merely designed a framework; the enduring structure is not yet visible. It will come into being, when, as, and if the farmers of this country wish it to. We cannot solve the problems overnight, and we cannot solve them at all unless you and your neighbors pitch in and help.

"The adjustment we seek calls first of all for a mental adjustment, a willing reversal of driving pioneer opportunism and laissez-faire. This country is filled up now, and grown up. There are no more Indians to fight. . . . The frontiers that challenge us now are of mind and spirit. We must blaze new trails in the direction of controlled economy, common sense, and social decency . . ."

That is a noble goal, not yet attained. But such a goal seems definitely compatible with the rural mind of today, which endures as our agrarian weather vane.

3

ACCENT ON COMMUNITY

THE nation was pioneered by seeding and multiplication of rural communities. Some of them grew into cities and towns. Others merged, shifted, or died. Yet the community remains the atomic unit of rural America. Beyond corporate limits of principal cities and towns the United States remains a hodgepodge of some 100,000 rural or semirural communities.

Accent upon community is still primarily a rural accent. True, during the past decade particularly, the city community center has shown increasing vitality. But it is still difficult to evaluate, for essentially the city community is a mere superimposed segment of a far greater population structure.

In city and country alike, however, usage of the word "community" has strayed far from basic definitions: Such items as "community chest" and "community spirit" incubate into mottoes for booster clubs or labels for commercial merchandisers. Editorial pages and law tests have tended to make "community" a mere synonym for "body politic."

But the implication that community is merely "any body of persons having common interest or interests" is not apropos of the prevalent importance of the word. A comprehensive American definition of community must picture free men democratically combined for a common benefit. Such a definition is deliberately chosen for purposes of this book, in which our term "community" implies the adjective "rural."

Our earlier pioneers clustered in communities for defense from the wilderness. When literal frontiers were no more, the thinking of rural America, like that of urban America, tended to accent individual property rights and the privileges of arbitrary enterprises.

Today, faced with numerous powers of destruction, American agriculture grows more dependent upon the community of individuals. For on numerous agrarian fronts the wilderness is rapidly returning, a wilderness not of untamed forests and marauding Indians, but rather a wilderness of cruel desolation, of soil and climate in revolt against man.

During and after the great drought of 1936, which withered and blackened a million square miles of fields and ranges, agrarian destitution shifted strongly to the Far West, where communal open-range herding was arbitrarily replaced by a "legal" and highly individualistic regime of private ownership of ranch and range.

Broadly typical of far western dry land is North Dakota, which is a state slung together during the eighties by railroad promotions. Life and profits of frontier railroading à la Astor, Morgan, Hill, Harriman, Whitney, Vanderbilt, were heavily dependent upon sale of bounty lands given by federal donation to railroad promoters who often enough voted the right away.

Some of the land was verdant enough to support open-range herds, far-scattered communities of sheep or cattle operators, and bands of livestock-raising Indians. Punctually the railroads began to advertise and sell their real estate booty as new farm frontiers of unexcelled promise. They instituted "sucker" trains equipped with brass bands, free meals, and cheap excursion rates and stooges, which united to change prospects to buyers.

New buyers of "dry farms," principally Midwesterners, immediately set out to impose the same greedy, grab-quick style of farming then in flower in the Midwest. Thus they destroyed solvent grass to make way for insolvent grain, and established state and county governments which took no recognition of the potent influence of climate upon efficacy of government.

The decline of community structure in our drylands has shaped a tragic saga of dry-land insolvency. For example, during the Roosevelt administration North Dakota's total receipts from the Treasury Department, in direct and emergency relief and loans, amount to half a billion dollars, which would probably buy the state lock, stock, and barrel, and the burying grounds.

At Bismarck, once capital of the Mandan Indians, I talked with Fred Symons, who edits the newspaper and studies the Dakotas. He said:

"If we ever get off the dole, we've got to develop a sounder agriculture. Better grass and better livestock are our real hope. To attain them we've got to learn to work in communities. This may mean a setup of grazing communities with a common reserve of surface water; or it may mean a communal center of irrigated lands from which livestock operators can be assured of a dependable reservoir of feed."

In western Dakota I talked with an old-school sheep rancher who commented: "It ain't sensible for men to claim they own grass. Out here it's grass that owns men. . . . Use of grass can never be a free-for-all grab by one man or one outfit. We got to learn again how to herd in groups for a common good."

At a remote Dakota village two cowboys climbed out of a Ford truck and seated themselves on the drugstore window sill. Their truck carried a trailer on which was a horse, ornately saddled and carefully goggled for protection from dust. With apt profanity the cowboys talked of weather, dying ranges, and ailing ranches. We indulged in meditation and beer. In the latter half of his second Stein the older cowboy began to discover a faint vestige of hope.

"Someday cattle will come back to Dakota. Rain or no rain, empty spaces when left alone will sprout weeds and grass. When grass does come back we'll have to have mergers of cattle ranches, outfits that can afford to feed and market herds without pasturin' the grass plumb to death. Either we've got to work together, or stay on the WPA till hell turns to ice."

On this line of meditation I joined with Mr. William Allen White, on an extremely hot day, at Emporia, Kansas. Bill White peered at me through small, frameless spectacles:

"In West Kansas—that's the wheat empire—two crops out of five at a good price, or three out of five at a poor price, leaves the farmer sitting pretty."

Dexterously the narrator swatted a fly with the first bulldog edition.

"West Kansas was opened in the eighties. The first line of pioneers tried spring wheat. There wasn't enough water to make the crop. They starved out. Then the few survivors learned how to grow winter wheat. That started the Kansas wheatland boom.

"Wheat remains the real citizen of these lands. All Kansas wheat-growers are born individualists. They'll take government bribe

money in one hand and spend it with the other hand—to plant more wheat. You can resettle 'em. You can send the militia after 'em. They'll merely burrow into sand piles, peep out of the dust, thumb their noses at you, and plant more wheat."

We prowled out into the blistering sun to attend the Emporia county fair. There the county agricultural agent talked of individualism and grass.

"Even Kansas needs the community as a basis for agricultural administration. So does practically the whole United States. From a standpoint of farming, this isn't one nation at all. We're a whole flock of nations. There is hardly a state with a climate anyways near uniform throughout. In terms of farm counsel, or supervision, or farm planning, the rural community is certainly our best working unit." Then he pointed out that the actual functioning of the AAA serves conspicuously to revive accent on the rural community by using the community as a basic unit of administration. This has definitely encouraged rural citizens to band together—if for no more enlightened reasons than the collection of New Deal patronage.

Rural Wisconsin offers some outstanding instances of the rural community's growing importance. After lumbering interests had ripped away the vast forests of northern Wisconsin, there followed tremendous promotion of cutover lands. Land companies and other speculators bought huge tracts of "stumpage" which they proceeded to sell as cheap farms. Tens of thousands of citizens bought the stumpy acres and attempted to make farms of them. Most of the ventures failed. Depression made these pathetic ventures still more pathetic.

Mortality among cutover communities began to threaten the lives of surviving communities, since the latter were loaded with obligations for providing schools, taxes, and public charities for the former. Public health costs for the remaining hangers-on became exorbitant. Abandoned homes became serious fire hazards.

Luckily boundaries between farmable and unfarmable lands are reasonably apparent. Therefore, rural zoning appeared to be the one means for community survival. The state legislature passed an enabling act authorizing the experiment in "universal zoning." In Wisconsin the county commission, or governing board, has one elected member from each township within the county. Each county

commissioner is *ex officio* chairman of his township committee, which has two other elected members. State law gives the county board authority to "regulate, restrict, and determine the areas within which agriculture, forestry, and recreation may be conducted."

Since success of any zoning law is built on the support of public opinion, Wisconsin recommends that every motion to zone be inaugurated by a community "educational" campaign. The discussion meetings are held in schoolhouses, country churches, private homes. Landowners and all residents thus have opportunity to hear the purpose of the proposed zoning. Next a land-use survey of the entire county is made by the state university's college of agriculture. Tentative zoning maps are submitted to the attorney general's office. The proposals for zoning are returned for acceptance, rejection, or revision by the township committee.

Legal enactment of farm and nonfarm zones is made by the county board. When adopted, no deeds or titles can be issued for farm lands within an area thus listed as nonagricultural, though holders of land cannot be deprived of it.

The community thus finds protection against unsound expansion. To date about 250 Wisconsin townships, representing approximately that number of rural communities, have inaugurated countryside zoning. The venture in civic conservation is apparently helping the rural community to survive—as a government unit as well as a social-economic institution.

The rural township of New England also exhibits the rural community in beneficial action. The annual town meeting is still a good instance of community open forum, primarily concerned with such community obligations as poor relief, medical services, road and bridge building. There remain such picturesque (and unsalaried) officials as the township fire warden and the township fence viewer, whose duties do not involve telling Farmer Simpson how to survey and build fences for Farmer Simpson's own personal profit and peace of mind, but rather that of identifying whether Simpson's fences are in sufficiently good repair so that the Simpson livestock may not break out and destroy property for which the township is collectively responsible. Similarly the township tree warden is not a source of timber information or administration. He is a kind of semimagistrate who decides when a given tree,

regardless of its ownership, becomes a menace to roadway, stream, bridge, schoolyard, or other communal resource.

From such a seedbed of American civic theory there is reason to believe that the rural community may anticipate continued life. Federal administrative practices are taking better account of the single community.

Economically communities fail for much the same reason that individuals fail. The body ceases to produce, and in due time exhausts capital reserves. As I see it, the whitest hope for the revival and restored solvency of the American community lies in the fact that the community is already and clearly proved as an American way.

Perhaps this exposition exposes me to charges of wishful thinking. Communal instances thus far listed impress me as being of significance and potential importance. Historically, there is no real doubt that these United States have been (I devotedly hope they may again be) a world-renowned stronghold of rural community structure. Even Karl Marx was profoundly interested in rural communal life as reported from America during his lifetime. Such heroic American experiments as Brook Farm and Oneida Community quite justly gained their shares of international renown and admiration.

There is good opportunity for some penetrating scholar to estimate how much Marxian ideology may have been swayed or molded by echoes and recitations from within our own shores. European popularity of appraisals of American country life by such journalists as Washington Irving and J. Fenimore Cooper was not without influences. The heroic saga of American pioneering was a world story and our frontier community was a world example of social compromise and the prospering commune. Then as now the rural American was a distinctive hybrid of toiler and proprietor. Today the American farmer remains a unique blending of day laborer, craftsman, and proprietary capitalist. By ideological measure our rural community remains a highly admirable institution.

And a distinctive one. It has not been, and perhaps never will be, a standard-mold product. Its real genius is that engendered by man in his age-old struggle to survive from the soil. Its being is not reproducible by way of political isms or wasms. It does not comprise a happy hunting ground for the institutions typified by Honest

Joe Stalin and Comrade Adolf Hitler. The neurosis now labeled Communism and led, in America, by such two-by-four punies as Earl Browder has no valid place in either the theory or the practice of American community life. As a rural reporter, it is my belief that the lesser Stalinites, styled American Communists, and their camp following, called the "United Front," view the nation's agriculture with much the same tender affection that a lank dogfish evidences toward a school of mackerel: as easy and comparatively juicy meat.

This does not alter the reality or the possibility of the rural commune, nor does it seriously mar the hope of restored solvency for the rural community.

Factually speaking, the rural community's greatest success story is that of contemporary Mormonism.

Brigham Young, greatest of Mormon colonizers, like Thomas Jefferson, believed that tillers of the earth make the best citizens. Therefore, he directed his people to take farms from a desert wilderness, to reverence farming not only as a means of livelihood but as a way of life, to earn completely and to avoid charity.

Today these practical gospels of Brigham Young remain mandates of the Mormons—properly the Church of Jesus Christ of Latter-day Saints. The Mormons still are fighting, conquering, and settling the desert. In motive and philosophy, Mormon pioneering of today is virtually identical with Mormon pioneering of 1859.

On the long-idle Keogh ranch, in the Idaho dry lands about three miles from Malta, one may see modern Mormon pioneering. It is a 4,000-acre tract, once operated for cattle raising and later, when grass began to fail, for sheep. In 1936 the church bought the ranch as a colony site. In March of the following year I visited the place just as a new group of pioneers were moving onto the land.

I arrived during the doldrums of a mid-April noon, picked my way among empty corrals, and called at an aged bunkhouse built of mud-chinked logs, once headquarters for a hell-roaring bevy of frontier cowboys.

There was no evidence of a noontime lull. Four of the newly arrived colonists were in sight and all were hard at work. One was plowing a dusty field with a shiny new tractor, another was using a big draft team to plow out a badly neglected irrigation canal,



Iris Woolcock

WOODCHOPPING CONTEST



Iris Woolcock

IT'S WOMEN WHAT RUN THE TOWN

and two more were digging a well to supplement irrigation water provided by a hillside stream.

Less than a month before, the young Mormons had taken over the abandoned ranch and set out to bring new life to an establishment long dead. With subsistence as a primary motive, they plan to replace range agriculture with intensive cultivation. During these first weeks they had plowed and planted about 150 acres to crops, reopened about three miles of abandoned irrigation ditches, and planned the digging of five new wells which should bring water to about 1,000 additional acres.

All the boys have had previous farm training. During their first season they are working as a group, to make the best possible use of available equipment. The tryout finished, the land is being tenanted in groups of four, each member owning his own home and about thirty acres. The land was purchased with a down payment of as little as \$1 an acre—on a total price not to exceed \$30 an acre.

Having planted and harvested a first crop, these contemporary pioneers went to the near-by mountains, cut timber for building homes, sawed the lumber on the grounds, and traded labor in order to keep housing costs at a minimum. Having built homes, the boys have married—one wife apiece.

First home from work was 26-year-old Elder Chase (members frequently acquire the title of elder by the time they are eighteen). Reared in South Carolina and Florida, Chase spent two years in a law school, grew weary of legalities, took a salesman's job in Salt Lake City and there became a Latter-day Saint. Following church usance, he went forth as a missionary, wandering through England and Scotland—a fertile source of Mormon converts. The average "return" from each missionary is two converts. Elder Chase obtained his quota, lived meagerly, and paid his own way. The church paid his fare home.

Desiring to own land, he sent in his application to become a colonizer. Three months later he arrived at the Keogh ranch with three other returned missionaries, Elders Wallace, Hill, and Roberts. They reported to Mark Austin, 72-year-old livestock man and former agricultural director of the Utah-Idaho Sugar Company, who is now unsalaried and unofficial supervisor of the ranch. They took over the ancient bunkhouse, cleaned out an old well, and drew

straws for turns at housekeeping. Bedding, cooking utensils, and rations came from a church warehouse as a loan and not as a gift.

These pioneers came to the land virtually without money. They bought necessary food, clothing, and household goods on the credit of first crop. The church made them a temporary loan of implements, a tractor, two teams of draft horses. No member was allowed to begin buying land until he had successfully finished his tryout year. Then his purchase was limited to what is regarded as a subsistence farm. Now that irrigation canals are repaired and improved, and the river duly supplemented by the five newly completed wells, the ranch is available for eighty or ninety families. And the church underwrites building a temple, school, and social center.

But life on the old Keogh ranch is one of plain food, rough work, no movies or bright lights. A life of almost perpetual work. But the pioneers declare they like it and look forward to the future.

Superficially, this present-day pioneering is not particularly dramatic. But the people of Joseph Smith and Brigham Young still plod forward to take livings from land. They hitch-hike, drive flivvers, follow winter-lean nags. It is essentially the same hard way. Some falter. Some will fall. But some are winning.

Selection of colonists, like choice of farming sites, is never an easy problem. Through the generations, church leadership has found that liking for farm life, the desire to own land and grow crops, is better born in a man than thrust upon him. More than nine-tenths of all Mormons who have lately opened farms have taken land on their own resources, asking no help of the church beyond expert advice, community work, and temple building. These services the church always offers.

Among the colonists who require credit, the church must necessarily make careful selection. There can be no absolute rules; each applicant must be judged on his own merit. Investigations are made under the direction of the church security board or its appointed agent. Applicants expect neither donations nor cash wages. As a matter of mutual safeguard, they must usually fulfill a year's tryout on the land to prove whether or not they can stick and like it. If they can't, the deal is closed with a minimum of loss. If they can, the deal is on for a long time.

For proving the settlement possibilities of untried land, the church

is prone to send first a pioneer group of single young men to open the way and make a first crop before the site is peopled with families of dependents.

Under the present church security plan, caution underscores all new farming colonies. Need for placing members on new land is accentuated by apparent climate changes in various parts of the intermountain West. In some areas, persistent decline in rainfall seems to be undermining the future of dry-land farming, making irrigation a necessity. For example, there is the one-time prosperous community of Vernon, Utah, where, for the past decade, rainfall has grown less and less, until now all dry-land farms are abandoned. The same is largely true of Widstoe, a high-plateau farm community near Powell National Forest. Many farmers who bought land on credit have lost it through foreclosure. Now the church seeks to help them to other land.

The most extensive land service is of an advisory nature, directing members who are able to help themselves to desirable land. The church is sending farm experts throughout the intermountain West to make surveys of favorable lands now for sale. Under direction of the security council, these investigators appraise the land, report on its water resources and price, and then publicize the information through the various wards and agencies of the church. Members are urged to colonize in groups. At present, the founding of independent farm settlements is in progress in various parts of Oregon, Montana, Idaho, Colorado, Arizona, and New Mexico. Colonizing is most active in southern and central Idaho, and in the areas of Idaho Falls, Rexburg, and the Twin Falls irrigation center.

For members unable to afford land, the church is buying tracts for tryout settlement and eventual resale. During the past few years the church has bought about 10,000 acres in this manner, allocating the land in small strips of, usually, 50 acres or less to the family. Prices must be low. Payment of prevailing averages for land would plunge the moneyless colonizer hopelessly in debt. In most instances, the church favors sites where water can be brought to the land by means of home labor and enterprise. Since many pioneers have neither seed, livestock, nor implements, the church frequently supplies tractors for breaking the land and advances implements and seed—wherever possible from church-operated warehouses. Charges

are cut to a minimum. But some form of payment is expected.

The church has lately helped locate a twelve-family farming community about 100 miles east of Calgary, Alberta. Another new venture in colonization is near Salmon, Idaho, a once-famous livestock country. About 500 members have lately settled in the Salmon area, and are now buying farms. The church recently bought the former Governor Shoup ranch near Salmon and resold the land to 10 families, who now own farms ranging from 30 to 500 acres each. Most of the old ranch, once too dry even for reliable range, is now under irrigation. Principally with their own labor, the settlers have completed three miles of irrigation canals, and mustard-brown range is changing to green fields and alfalfa and timothy and experimental crops of sugar beets. Labor is paying for the land.

All these are Mormon colonies of the future. Not yet finally proved, they are a direct revival of colonizing principles which opened most of the Mormon land now in use. For a century Mormon land-taking has been a gradual and laborious endeavor. To change the deserts of today into secure farm lands of tomorrow takes time and work. To appreciate this, you may see Hurricane, a Mormon community up in the occasional mesas of southeastern Utah, about twenty miles west of Zion National Park.

Hurricane is a Mormon colony of the present, only recently become green and plenteous with good farms. The life of the community depends upon a homemade irrigation canal which taps the rambunctious and unpredictable Virgin River. The canal is about 8 miles long, 9 feet wide and 4 feet deep. It carries enough water for 45 farms and irrigates 2,200 acres, on which live about 1,000 people. Mormon settlers spent fourteen hard years shaping this canal. They dug it with picks, shovels, and drills, breaking through nine tunnels, guiding its course along sheer cliff walls from 50 to 200 feet above the mesa table, and hoisting high board flumes upon trestles.

As an engineering feat, the most remarkable thing about the canal is that it can and does carry water. As a demonstration of human persistence it proves amazing courage in the face of ruinous odds. The men who built it, their children and grandchildren, are only now beginning to realize benefits. By magic of sweat, a desert has been changed to luxuriant fields and a community of good

schools, churches, and homes. This area has been opened entirely without government aid or any other outside help. There is always water in the Virgin River. There was rich soil awaiting the water. Fourteen years of relentlessly hard work performed the magic union.

Back in 1893, a group of citizens from less-successful Virgin River settlements appointed a committee to go through the canyon and consider the possibilities for a canal. Years passed. Finally about a hundred men organized a stock company to build an irrigation canal through the badlands.

Blocks of stock were limited to twenty shares each, all payable in labor. Each share entitled the owner to one acre with "primary water rights and an equity in a town lot, exact choice of land to be decided by drawing straws."

The length of the proposed canal was marked off into "stations" of four rods each. Stations were assigned to stockholders, who pledged themselves to work out their stock payments. Labor credit for various sectors of the canal was decided on a basis of the difficulties to be met in the construction—solid rock, loose rock, or earth.

Meanwhile the settlers faced the need of earning a living. In summer they ceased canal building to tend their farms. Between November and March able-bodied men and boys packed grub boxes and went to the mountains, leaving the women to tend the homes and livestock. Workers wintered in the rough lands, marooned for months at a time by blizzards or high water.

Nine years of labor found the canal at a standstill. To avoid starvation, part of the workmen were forced to withdraw. Reckoned at wages of less than a dollar a day, more than \$32,000 worth of labor had gone into the undertaking. Yet much of the hardest construction, including the nine tunnels, was still unfinished. James Jepson, president of the group, went to Salt Lake City to ask a loan from the church, offering as credit collateral shares in the venture. The church subscribed \$5,000 worth of the stock. Most of this money went for supplies—principally dynamite and blasting powder.

Workers were paid 25 per cent in cash, 75 per cent in stock, until the job was finished. Finally the canal carried water to the desert—which meant land clearing, plowing, planting, and home building.

The first ten families to move in spent their beginning year in tents and dugouts.

Rich soil and plenty of water now make this land semitropical in appearance. Fruit trees grow well, and though the community is still about fifty miles from a railroad, Hurricane peaches, grapes, figs, pecans, and walnuts are taking a welcome place on intermountain markets. The second year after its colonization, the Hurricane ward, or church, contributed about \$5,000 in voluntary tithes, representing a first-crop income of about \$50,000. Probable cost of the eight miles of canal was \$60,000—at least \$50,000 of it in labor. Today the income from a single crop would more than meet the expense of the entire project. Originally, the desert land was bought for an average of \$1.25 an acre. It now sells for as much as \$300 an acre.

In 1857, while giving counsel to the effect that it is cheaper to feed Indians than to fight them, Brigham Young pointed out that the terrors of the wilderness, such as Indians, man-eating grizzlies, and uncrossable rivers, were but temporary drawbacks. Indians would grow accustomed to white men. Mormon hunters would soon wear down the grizzlies. Ways and means would eventually be found for bridging the more troublesome rivers. But Brigham Young never entertained any illusions to the effect that wilderness fighting is a game for softies, or that the intermountain West, if ever won, would be easy to hold.

Today there are few, if any, man-eating grizzlies left in the Mormon country. Indians no longer take the war trail. Roads are moderately passable. But the old devil, weather, stays on. Floods and wind erosion are forever menacing farmers. Cheap land that will grow crops becomes forever scarcer. Most of the good land accessible to water is already either in use or held at prices beyond the purse of a poor colonizer. The job of colony founding was never so difficult as it is today; the return of men to the land was never more difficult. Church leaders realize this.

The present urge is toward cautious expansion and the improvement of present holdings. Gradually the land is being made more productive, the better to fill the needs of a fast-growing membership. Among the Mormons, most of the remaining unemployed are unskilled laborers. How to train these unskilled workmen in the

midst of complicated labor uncertainties is the immediate problem. The one answer seems to be a widespread return to land. Throughout the Mormon country, poverty and distress have been found principally in towns and cities, the most secure living in farming communities. Thus the church's biggest problem is to help more young men and women to help themselves to land. It is a yea-and-nay proposition. On the yea side is a tradition of pioneer hardihood which has brought under cultivation much of the American desert. There is the statistical truth that Mormon population now has the lowest death rate of any group in the United States, one of the highest birth rates among all Caucasian peoples, a life span longer than average. Among Mormons the proportion of college graduates and professional degrees likewise sets an all-American high for any similar group. The average holding of wealth is, perhaps, the highest of any comparable church membership. The church is strong and free of debt. Tithe revenues are highly reliable. There is no salaried ministry.

Still more pertinent to the new challenge of economic security is the fact that the Church of Jesus Christ of Latter-day Saints has an organization founded to suit temporal as well as spiritual needs. The church is actively interested not only in farming but in merchandising, banking and investments, and manufacturing. Its international headquarters are at Salt Lake City. The church is apportioned into 118 regions, or stakes, roughly similar to counties, as administrative units. The stake, governed by a presidency and a council of twelve, embraces a number of wards, similar to individual churches of other denominations. The ward is directed by a resident bishop and his council. Actual leadership is almost entirely in the hands of businessmen, farmers, and other professionals, who serve without cost to the church. In all there are now 1,080 wards with a total ward membership of about 747,000.

Farming remains the dominant trade of Mormon membership with the farming communities scattered throughout the arid and semiarid West from Canada to Mexico. Water is the lifeblood of this agriculture. Use of water is the real foundation of Mormon security. In its practical sense irrigation in the United States probably began in Salt Lake City—just two blocks from the church's administrative building. That was ninety-six years ago. Mormon pioneers undertook to plow the first dry furrow to carry water.

One plowshare broke. But the second dug into the dust and hardpan, opened a way for water which irrigated a first crop of potatoes. Since then the irrigation ditch has been the Mormon trail to security. Now irrigation has changed from a frantic experiment of a desert frontier to a commanding science. In this fact church leadership finds a foremost hope for continuation of Mormon self-sufficiency.

This pioneering in the science of irrigation has provided a new yardstick for measuring water resources. It has proved, for one thing, that unless the soil is naturally rich irrigation is a poor investment. Numerous federal government irrigation projects now current are storing huge quantities of water which are available only to poor land. Church-directed research also proved that actual relation between amount of water applied to land and crops harvested is often affected by the law of diminishing returns. That is, the first five inches of water to the acre may make fifteen bushels of wheat; the second five inches only seven additional bushels, and the third only four bushels more. In general, returns from irrigation are likely to increase as a given source of water is spread over more land.

This suggests irrigation as a new method of crop control. Dr. John A. Widstoe, foremost church authority on irrigation, was one of the first students to demonstrate that by cutting off water from wheat immediately before harvesttime the protein content of the grain can be materially increased; and that food or feed qualities of various other crops can be materially influenced by control of irrigation.

Scientific agencies of the church are going further with this study. They find that better fertilizing of land can greatly reduce water requirements of various crops and that quantities of water now being lost in seepage from canals and ditches might be saved. Dr. Widstoe, like other outstanding students of the subject, believes that persistent improvement in sources and technique of irrigation can substantially increase, and possibly double, the present acreage of irrigated land. This would make possible the establishment of a great many new farming colonies and yield better returns for the labor and water fees now spent for irrigation.

For more than a century, Mormon management has recognized the fact that success in farming rests partly upon the towns and

cities—upon the townsman's ability to stay employed, to earn and to buy. Helping men and women back to land is one of the schemes which have already taken more than 25,000 Mormons off federal relief and given assistance to perhaps 30,000 members in want. It has helped to fill regional storehouses for the benefit of needy members who are willing to work for what they eat and wear, and has found jobs for at least 23,000 idle members.

Admittedly, the experiment time has been too short for final judgment or proof. But the security plan is no novelty. Instead of being a new deal, church security is a deliberate return to a gospel of pioneering days and ways, a gospel old as the church itself. For, "the aim of the Church is to help the people to help themselves . . . to set up a system whereby evils of the dole will be abolished, and where independence, thrift, industry and self-respect can again be established among our people. Work is to be re-enthroned as the ruling principle of the lives of our church membership."

This statement by President Heber J. Grant suggests the church's outspoken disapproval of prevailing practices and principles of federal relief.

In October, 1935, about 85,000 Mormons were receiving relief—7,300 from the church, the rest from the government. Church leadership estimated that between 15 and 20 per cent of the relief takers "either did not need it or had farms that might, if farmed, have kept them off relief."

But there was no immediate way of taking all members off relief. With the opening of the Mormon security program, the church admonished members to get off the WPA as soon as possible, meanwhile to "be scrupulously careful to do an honest day's work for a day's pay."

Meanwhile the church's security plan swung into action, offering work with payment in needed merchandise rather than cash. Church security work now includes planting and cultivating gardens and orchards, canning meats, canning and drying fruits and vegetables, making and remodeling clothing, repairing shoes, woodcutting and establishment of city woodyards, butchering, remodeling homes, building storehouses, root cellars, furniture making and repairing, community hospitalization, vocational training for boys and girls, making tractors and farm implements.

To date, twenty-four storehouses for crop harvests, canned goods,

clothing, leather, farm tools, and various other products of relief work are completed and in operation. In the main, the buildings and space have been contributed by members in addition to customary tithe offerings. These storehouses are widely distributed throughout Mormon territory and offer the beginning farmer an immediate supply of necessities, with the chance to repay in kind rather than in cash.

Here is a typical instance: Last year a farmer in the lower Cache Valley had an enormous cherry crop. He sold the first harvest while the market was strong. When the market began to weaken he contributed the remainder of the crop—about three tons—to the local storehouse. Women of the ward rallied for a canning bee and put the entire three tons of cherries into cans.

It happens that the new Mormon pioneer community near Calgary, Alberta, located in a great cattle country where fruits cannot be grown, has a great oversupply of beef and a perpetual undersupply of fruits. A warehouse trade was effected—canned beef for canned cherries. The Canadian government made special provision for free admission of the exchange. Railroads reduced freight on the barter goods to half.

On farms, as in towns, the Mormon works program marches on. Besides tillage, storage, manufacture, and education, 73 new temples are now being built. The church pays about 60 per cent of total costs from general funds. This is enough for purchase of materials. The wards contribute the remaining 40 per cent, principally in labor, part of it given gratis, part paid in crops or in storehouse goods. A few of the members still cling to the federal works, rejecting the church's offer of work in return for food, shelter, clothes, and medicine, and expressing preference for government cash which they can spend as they like.

Speaking as a non-Mormon, I believe the Mormon prowess of "moral persuasion" is one of the most amazing of all American phenomena. It is the invisible power behind the entire security program; it energizes the whole project of colonizing new land. Just now the power of moral persuasion behind Mormon land-taking, and the security program generally, appears to take primary source from one individual—a plain-living and plain-spoken old man who works in an elaborate gold-and-marble office suite in Salt Lake City.

His name is Heber Jddy Grant. He was eighty-four last November. He is now serving his twenty-third year as seventh president of the Church of Jesus Christ of Latter-day Saints.

Soft-spoken, bearded, President Grant looks out on an ever-broadening world. During his lifetime he has watched the rise of all the famed buildings of Salt Lake City—the Mormon tabernacle, the great temple, church headquarters, statues, shrines, modified skyscrapers. He has watched streets and thoroughfares smother subsistence gardens, pastures, and orchards. He has seen the rise and prosperity of hundreds of towns and farming communities throughout the intermountain country, seen millions of acres of desert made farmable and verdant.

All this Heber Grant regards as a logical development of truth. He concedes that truth is a pretty hard word to define. For further explanation, he relies heavily on a little book called *The Power of Truth*, written by William George Jordan, and often pauses to read aloud the opening sentence: "Truth is the rock foundation of every great character. It is loyalty to the right as we see it."

Heber believes in the power of moral persuasion and that its foundation is truth. Truth demands practical administration for any establishment, from a subsistence farm to a billion-dollar church. He believes that a continuation of colonizing is the best possible foundation for continuation of a solvent church. He believes that good planning and moral persuasion will continue to lead Mormons to the land. But colonizers of the future must work and hold their ground in the manner of land-takers of the past. Mandates of the church direct that "the idler shall not eat the bread of the laborer."

He believes that government relief is bad for business, still worse for social and spiritual stability. A government dole, as he sees it, is a matter of living in an air castle. This inspires another of Heber J. Grant's favorite quotations from William George Jordan:

"Living in an air castle is about as profitable as owning a half interest in a rainbow. It is no more nourishing than a dinner of twelve courses, eaten in a dream. . . . The atmosphere of air castles is heavy and stupefying with vague hopes and phantom ideals. The architectural error about air castles is that the owner builds them downward from their gilded turrets in the clouds instead of upward from a solid, firm foundation of purpose and

energy. This diet of lotus leaves is a mental narcotic, not a stimulant."

Perhaps this quotation carries a great deal of real America today as well as yesterday. "Rehabilitation," as planned and directed by the Mormon Church is perhaps the nearest widespread contemporary approach to literal pioneering. It is a commanding adventure in hard, even primitive, work. Distinctly capitalistic, it nevertheless places heavy accent on community.

That is a relevant item. For American farming, like most other basic works, is once more a study of men who would band together in community against powers which would overcome them. The savage wilderness is still savage—not with scalp-seeking Indians or stalking mountain lions, but with forces of climate and essential economics which apparently grow more and more complex and vexsome. Thus as solitary work becomes the less feasible as a way of worth-while production, paradoxically the desire for personal gain seems nearly as strong as ever. This paradox also suggests new accent on the community.

4

TENANCY OVER THE NATION

FARMERS of the United States are steadily losing ownership of their land. Year after year the percentage of all farms under rental continues to grow. In 1880 about one-fourth of all our farms were "kept" by tenants. In 1900 the figure was 35 per cent; in 1910, 37 per cent; in 1920, 38 per cent; in 1930, about 42 per cent; in 1940, approximately 47 per cent. Except in New England and a few of the South Atlantic states, tenancy increases throughout our nation, and no political regime or credit system has yet thwarted its determined growth.

In 1935 the proportion of farm land under lease or rental to the operator ranged from 62 per cent in South Dakota to 8 per cent in Maine and Massachusetts. Equities of the farm operators in all farm real estate of the entire nation ranged from an average of less than 30 per cent in Illinois, Iowa, and South Dakota to an average of over 70 per cent in Maine, New Hampshire, and West Virginia. The census of 1940 clearly evidences a continuation of this trend.

Cotton remains our greatest tenant's or sharecropper's crop. Today about 75 per cent of all cotton farms, as classified by census, are tenant-run. More than a fourth of all farms of the United States are cotton farms. Outside of cotton farms, slightly more than a third of all our farms are tenant-run.

The average gross value of all cotton farms is about \$2,950 each; while all other farms in all parts of the country represent an average value of about \$9,250 each. Thus quite obviously cotton tenancy is not occasioned by high values of farm properties. Cotton happens to

be a harvest best suited to tenant operation and cottongrowing remains an outlet for services of rural millions whom other lands and trades do not require and will not accept.

Very small farms (less than 50 acres) are the most numerous tenant lands of the South. In most other parts of the country tenancy ratios are higher among larger farms of higher value.

Quoting Dr. H. A. Turner, of the Bureau of Agricultural Economics:¹

"The rate of tenancy among white farmers of the South (46 percent) in 1935 is much less than among colored farmers (77 percent). Among white farmers of the nation, excluding the South, the rate of tenancy was 30 percent. The rate of tenancy among colored farmers of the South has increased only a little since 1900, when it was already 75 percent. But the tenancy rate among the white farmers of the South has increased considerably—from 36 percent in 1900 to 46 percent in 1935. The rate of tenancy among farmers elsewhere than in the South changed less rapidly. It averaged 25 percent in 1900 and 30 percent in 1935.

"Among Negro tenant farmers of the South it is worth noting that 59 percent operated as 'croppers' in 1935, that is, they depended on their landlords not only for land, but also for the work-stock with which to farm that land, and usually even for food and feed while making the crop. The proportion of southern colored tenants who were croppers was only 47 percent in 1920, then increased to 54 percent in 1925, 56 percent in 1930, and 59 percent in 1935. By contrast, only 29 percent of the white tenants of the South farmed as croppers in 1935, which is the same percentage as in 1925, and only a little higher than in 1920.

"As might be expected, the percentage of tenancy among young farmers is much higher than that among older farmers. But it is interesting that the number of young farmers has decreased, and the number of middle-aged and old farmers has increased; that tenancy has increased among farmers of every age group, and that the increase is particularly rapid among farmers of the younger ages. Thus, of the number of farmers 25 to 35 years of age farming outside the sixteen southern states there were approximately 652,000 in 1910, but only 449,000 in 1930, with a rate of tenancy among these farmers of 47 percent in 1910 and 59 percent in 1930. . . .

" . . . The influence of tenancy is increasing rather than decreasing

with the passing of time. There were only 180 counties in 1880 wherein as many as half of the farms were tenant-operated, and practically all these were in the South; but in 1935 such counties totaled 1107 (of 3060 counties and parishes in the United States), and they effectively blanketed the Cotton Belt and much of the more fertile parts of the Corn Belt as well. The number of counties wherein half or more of all farm land was under lease to the operator was 403 in 1916, 772 in 1925, 1020 in 1930 and 1107 in 1935. . . ."

All told, tenancy is a rather strange commodity.

So, for that matter, is news. Recently while strolling through England, Arkansas, I was meditating on these truths. In February, 1931, the name of this town was in headlines throughout America and throughout the world. For England, Arkansas, had become the scene of the first recorded rural food riot in the history of the United States.

On a dreary winter afternoon, a band of farmers, most of them tenants or sharecroppers, had banded together, raided a store and completely looted its shelves. These were hungry men. Their crops had failed. The whole area was victim of a disastrous cycle of bank failures. And landlords were unable, or unwilling, to advance money or food to tenants and sharecroppers.

I did not see the riot, but as a newspaper reporter I was among the first to cover its aftermath. A local sheriff had telephoned the state capital for help. News noses sniffed. Three of us, then in Little Rock, piled into an automobile, splashed and skidded thirty miles to the scene of the riot.

The looting was ended. The storekeeper roamed dazedly through his ruined store. He had been pillaged "down to bedrock" by neighbors and friends; he had been raided and robbed by home people, many of whom he had long called by their first names; to whom he had frequently sold goods—for honorable payment.

The sheriff and his two rural deputies were likewise somewhat dazed. They had recognized many of the rioters "as honorable, peace-abiding citizens. But the raiders had been hungry and desperate. They declined to listen to pleadings or argument. The sheriff now waited at the doorway, puffing a cigarette, hat pulled low over his eyes. When I asked him his opinion of the real cause

of the riot he said, "Sharecroppin, goddammit." And he added, "These men ain't criminals. They're sharecroppers. They planted jest what their landlords told 'em to plant—cotton. The crop got burnt up by drought. The landlords is mainly broke. Now the landlords can't borry money and the tenants has got no cows or chickens or gardens to depend on. They can't eat cotton. They can't sell it. I don't blame any man for fightin' when he hungers. All I blame is this whole bloody set up of tenancy."

England, Arkansas, is a typical crossroads town of the sharecropping South. It is a clearing center for tenancy failures and hopes for tenancy successes.

Still a dominant news phase of American farming, tenancy is also a "root tradition." In colonial days, farming was preponderantly an agriculture of tenancy. At the outbreak of the Revolutionary War, and indeed through 1800, at least 60 per cent of all our farms were tenant-run. The opening of public domain and homestead pioneering drastically lowered that percentage. But since 1880 the proportion of tenant to landowning farmers has been growing.

This increase is definitely a world-wide trend. In the British Isles, whose agriculture has set patterns of farm practice for so much of the modern world, at least 90 per cent of all farmers are rent farmers.

About 55 per cent of the farmers of Belgium are tenants. In Japan the percentage is about 30; in Germany, about 25; in France, 25; in Ireland, about 40; Canada and Denmark, with nearly 85 per cent of their farmers landowners, probably lead the world in farm proprietorship. But by way of remembering that tenancy characterizes new countries as well as old, we might notice that in Australia 78 per cent of all farms are tenant-run; 59 per cent in New Zealand, and about 40 per cent in frontierish Argentina.*

In the United States, the most rapid increase in tenancy now takes place in the richest lands of the Midwest. In "banner" farm states, such as Iowa and Minnesota, more than a third of the farms are now tenant-run. In Michigan, Wisconsin, Illinois, and Indiana the tenant increase is even more spectacular. Definitely on the upgrade throughout most of the country, tenancy is a majority

* These statistics were approximately correct as of January 1, 1939. The effect of the current war upon tenancy status of Europe is still unknown.

agriculture only in the South, and thus the spotlight of tenant news continues to play southward.

During the past decade, the southern sharecropper has become a folk-drama item in real and would-be American literature. Newspapers, magazines, motion pictures, books, radio, and the stage have foaled a vast cyclopedia of sharecropper literature—sad chronicles of po' white trash as he anguishes and languishes among the juniper forests and you-all birds, way down So-outh.

Frequently these expressions are grasping the sleeve of truth. Though the sleeve becomes warped and threadbare with continuous tuggings, it nevertheless belongs to a garment of fact. As a Southerner I am abundantly aware that sharecropping, considered broadly, is a deplorable institution. Roam through the South and you are certain to see a great deal of tenant tragedy: forlorn shacks, hopeless hovels, fields gully-torn and ravished of topsoil. It is mere honesty to admit as much with the greatest possible candor. And the truth stands that in the cotton-growing South you can see also good tenants and good tenant farms.

For example in southern Alabama I became acquainted with a farmer named James N. Sanderlin, an expert cotton breeder, a soil researcher, and a veteran tenant who now owns and operates a 4,000-acre plantation which lies in rolling foothill country. Most of the land he bought at "fire-sale" prices, because it had been "cropped to death." Sanderlin proceeded to prove himself a doctor of sick soils. He began to restore poor land to life by slow and oftentimes expensive processes of legume planting, green manures, terracing and drainage, application of lime and animal manures. Only when soil becomes reasonably fertile does he rent the land, and once rented he insists that the tenant take proper care of it. He explains:

"Good soil draws good tenants. Poor soil draws poor tenants. Success of any rent farm depends on the caliber of its tenants and the caliber of tenants depends largely on the fertility of the land."

Mr. Sanderlin is of English parentage. Though American born, he spent about ten years of his boyhood on an English farm. He has, therefore, learned at first hand some of the great creeds of British agriculture, and some of them he has applied.

Though tiny in size, England is a great farming nation. For each citizen she has only about two-thirds of an acre of farm land;

whereas here in the United States we actually cultivate about two and two-thirds acres for every citizen. About three-fourths of the land of England is in grass. Yet these sparse acres provide the enormous English public with most of its milk, about half of its meat supply, more than four-fifths of its vegetables, half of its fruits, and about a third of its grains. Such accomplishments prove a great agriculture.

In England when a tenant leaves a farm he is credited with all improvements he has made, including improvement to soil. He is entitled to compensation by the owner for all fertilizers applied, and for terracing, drainage, and other substantial improvements to land. When a tenant leaves a given farm or plot he can thus collect for his own investment in improving another man's land. He has sound and logical motive for making improvements.

Sanderlin likes this practice. On his own plantation he cannot make literal use of England's accredited tables of values for soil improvement. But he can and does make use of the principle.

At present he rents about two-fifths of his plantation for cash. The rest of the rented land is sharecropped on standard terms: two-thirds of field crops and livestock for tenant, one-third for landlord; the tenant supplying work stock, implements, and seed—otherwise a half-and-half division.

For manures applied by tenants he makes a cash refund of from 25 to 50 cents a ton. For commercial fertilizers applied, he repays half the total cost, for he knows that increased yields build up the value of his land and increase its rentals. When green manures, like vetch or rye, are advisable he refunds rentals for the year or gives free use of the same acreage for field crops. For applying lime he bears half or more than half the expense. He provides free use of land to reward tenant efforts in draining or terracing. His terms of lease demand crop rotation. This automatically prohibits a monopoly of cotton.

Sanderlin's plantation is a pertinent instance of the truth that yesterday's news of tenant failure sometimes weaves itself into today's news of tenancy successes. Thus notable trails lead forward in American land relations; trails of sound rental as well as sound ownership of farms; trails which may be reliably followed and bettered as needs and place require.

Being in an amiable mood, and possessed of a disposition almost invariably sweet during at least two days of the week, and being affectionate by nature, I shall temporarily forgo listing instances of tenant abuses, though I sincerely believe that for every instance of constructive and decent tenancy relationship in the South anyone will shortly discover a hundred which are socially deplorable or dreadfully corrupt, or both.

Although tenancy of land is almost as old as man's agriculture, much of its history is bleak and villainous; a saga of waste, deception, and cruel dishonesty. Furthermore, United States standards of land tenure are among the most rapacious and degenerate of the modern world; an overlapping disgrace to American government, courts, banking, to investment finance and miscellaneous ethics of ownership.

Yet land tenure is upbound, a seemingly inevitable trend of modern agrarian destinies. It has an unchallengeable place in the continuing history of yeomanry. Rental of land remains a proving ground and a steppingstone for ownership of land. During a prolonged era when demands for the harvests of our fields are tremendously varied, with rapid rises and collapses, tenancy facilitates upward and downward adjustments of acreage. It enables millions of our people to return to land, and in a measure to live from land.

Today, homestead land is rarely worth homesteading; livable farms are a coveted property. A poor man can no longer take good land to be his own by the might of his ax or his private enterprise as claimant. Farms are a basic property, with proprietary rights so ungenerous and dogmatic that a self-perpetuating orgy of farmland speculation and mortgage juggling seems permanently with us.

Farm property rights of feudal rapacity have survived in conspicuous disregard of self-evident needs of a highly industrialized era. Today the factory owner is hedged by hundreds of limitations of proprietor's rights. Laws require that he limit working hours of employees, reduce and control hazards to life and limb of employees, pay stipulated minimum wages, maintain standards of sanitation and emergency aid, abide by industrial child-labor laws, and otherwise curb and modify the rapacious philosophy upon which most American industry was admittedly founded.

In today's agriculture, law accords the employee or renter an absolute minimum of protection. Courts and government alike are usually deaf to his pleas. The majority of farms of the United States are of a size and type to be operated principally by one man (theoretically the proprietor) and his family. Though farm tenancy is a world trend, and though its increase is apparently as inevitable as tomorrow's sunrise, American government, both federal and state, consistently disregards this reality, with the result that the rent farmer, probably the largest labor group in the United States, is the least noticed and the least attended by law of all working classes.

The reasons are highly political and profoundly antisocial. With sleazy expediency our politicians continue to label the rent farmer a rural proprietor. The New Deal for Agriculture, through its successive AAA's, has carried forward this folklore, strewing billions of dollars of public funds for alleged farm relief, tranquilly avoiding the continued growth in tenancy totals, and the ever-lowering living standards of farm tenants generally.

From birth this New Deal for Agriculture has been basically capitalistic. Its regime has instituted a memorable high of big-farm profits. It has paid an appalling proportion of federal "benefits" to owners of land rather than to workers of land. It has dropped a few unavoidable crumbs to tenants, but the cream of the swag has gone, and is going, to big owners of big farms—200 to 2,000 acres. Study acreage limitation benefits paid to growers of cotton, sugar, wheat, and cattle, and you will immediately discover that an exorbitant percentage of all Treasury donations are being collected by a relatively tiny coterie of super farmowners, some of whom lift sums ranging from \$10,000 to \$1,000,000 yearly from the vast feeding trough of the federal government.

It is inclined to be a saga of crumbs for tenants and pound cakes for owners. Soil conservation "programs" of the AAA have further subsidized and glorified ownership of land. Their general force is to make rich farms richer, poor farms poorer, and in terms of protective legislation to leave tenants waiting in the cold.

It is true, and praiseworthy, that part of the seventeen farm credit agencies included in the New Deal for Agriculture have sought to make certain types of credit accessible to rent farmers who seek to buy the land they till. But stated broadly, in this

country as in many others any continued agrarian economy of scarcity serves to accentuate extremes of rural wealth and rural poverty, while subsidy on a basis of mere ownership leads backwards to a cruel and predatory jungle of *damn-you-it-belongs-to-me!*

There is pitifully little progress as regards just recognition of the rights and place of the farm tenant. The admirable, if still feeble, Tenant Farmers Union excepted, no widespread effort has been made to assure the tenant of his self-evident rights as an American citizen and a valid producer. Time and time again state governments have evaded such a responsibility. Coterie of two-bit politicians and swivel-chair lobbyists who serve as collection platters for so-called national farm organizations likewise continue to evade the issue of land tenure. The Roosevelt administration, like its ambiguous farm-tinkering predecessor, the Hoover administration, has largely fluked and dodged this agrarian essential.

For tenant consideration is a majority need, and it is a feat easily possible. Today our own rent farmers, as I have pointed out earlier, are perhaps the least protected of any great working group in the Western World. As a matter of United States Supreme Court record, a tenant has virtually no legal grounds for recovery of improvement of another man's properties, even if those improvements are essential to his own livelihood and gainful employment, even though they add materially and provably to the land's value.

It is probable that a tremendous majority of sharecroppers are not even protected by credible lease. Indeed, farm leases are so little used that the Department of Agriculture (a nonpolitical division) recently elected to publish a first bulletin on how to write and sign a lawful lease of farm property. Even with the scanty protection of a lease, in most states a farm tenant can still be evicted at any whim of the landlord's, without protection of work investment; and in some states without compensation of crops planted and abandoned at landlord's demand. The tenant has little choice of crops or tillage methods. It is notorious in southern farm history that cotton sharecroppers are frequently not allowed so much as a square yard of soil for growing a garden. Their chance to keep a cow, or a few hens, or any other belongings to improve rations and livability is usually dependent on the frequently missing discretion or benevolence of the landowner.

The chances of the average southern Negro sharecroppers to present a tenure grievance in a local court are as the survival chances of an ice cube in hell. In blind disregard of self-evident principles of land zoning landowners of all sections are allowed to rent, parcel, and otherwise foist the most sterile land for the use of tenants.

But today's story of land tenure in the United States is not an inevitable story. Its wrongs are not incurable. State legislation could readily provide a code of competent law for better protection of both tenant and landowner. With plans already completed and at an expense not exceeding 1 per cent of the present upkeep appropriation of the Department of Agriculture, the federal government, within a maximum of ten years, could most probably acquire and provide to local courts authentic and reliable soil surveys of every acre of tilled land in every county of the United States.

Such surveys can and do indicate with commendable accuracy the productive possibilities of soils and could comprise an unimpeachable basis for appraising soil improvements. It would be generally possible for career scientific and research divisions of the Department of Agriculture to produce tables of value for every type of tenant improvement in every farming section of the United States, and to present such tabulations to all farm agents and to every civil court in the country. This has already been done in other countries—as an accepted obligation of government and public census. Indeed, the present field personnel of the Department of Agriculture is now big enough to provide almost all farming counties not only with competent soil surveys, but with accurate and objective appraisals of all improvements made on farms by both tenants and proprietors.

Such skilled appraisers could then co-operate with local courts in enforcement of justice as regards land tenure. This might not be convenient politics, but neither are cruel poverty and vanishing soils. Neither is the picture of incessant multitudes of poor farmers changing land with every season, blackening and blasting their own lives as they proceed to waste and squander the nation's soil.

5

LITTLE RED SCHOOLHOUSE

LAMENTABLE insufficiency of our country schools remains a most serious barrier to a sufficient country life. As soil grows poorer so also does the rural phenomenon of the little red schoolhouse.

My mother, who spent her childhood in a backwoods farming community of the Arkansas Ozarks, attended five terms of country school before breaking away to enter the preparatory department of a tiny fresh-water college. Three times at crossroads schools she was turned back from her sixth reader and decimal fractions because none of the country schoolteachers knew how to "work" fractions and none could read the sixth-grade reader. That was during the 1870's.

In this year of 1940 I can show you the way to country schools in Arkansas where teachers still "turn back" their older pupils when they arrive at decimal fractions and the sixth reader. I can lead you to dozens of country schools in several different states where school terms range from four to eight weeks a year. And I can show you reports of the National Education Association estimating that not less than 1,400,000 country children of the United States are today sitting at desks in crossroads schoolhouses which are condemned as unsafe or unsanitary; that another million rural children are attending classes in such makeshift quarters as abandoned lodge halls, stores, churches, or tents; and that at least half a million more are going to school only half a day because there is not space available to house the entire school enrollment at one sitting.

Even in the comparatively prosperous farming year of 1930 the National Education Association estimated that at least 800,000 rural boys and girls, of ages from seven to thirteen, were not in school

at all, because they were living in communities too poor to provide public schools of any kind or because they were born of families too poor to provide books, clothes, and other essentials of primary schooling.

Of the same tenor is the 1940 report of the White House Conference on Children in a Democracy. Here are some of the more appalling findings of that Conference:¹

"More than a quarter of all families of the United States have yearly incomes of under \$750; a half of all families of the United States have an income of less than \$1,160 and two-thirds of all U. S. families have incomes of less than \$1,500 a year.

"A third of the nation's families cannot afford even an 'emergency level' diet. More than half cannot provide a maintenance level in food. . . .

"These below-level families cannot provide conditions of health, proper housing or medical care. Still our social-insurance system fails to protect the family where illness strikes, though loss of income by sickness is a chief cause of economic insecurity.

"Four-fifths of the expenditures for general relief is spent in eight states with less than half the total population—leaving the other half in greater need.

"These poverty conditions have perpetuated child-labor problems, though there has been some decline in child labor due to the general unemployment. But child-labor provisions of the Wage-Hour Act apply only to industries in interstate commerce. Only twelve states have set a sixteen year minimum age for workers in industry and only eleven states have a 48-hour maximum week. In agriculture, which employs three-fourths of all under-sixteen-year-old children who work, there is practically no control of hours or working ages.

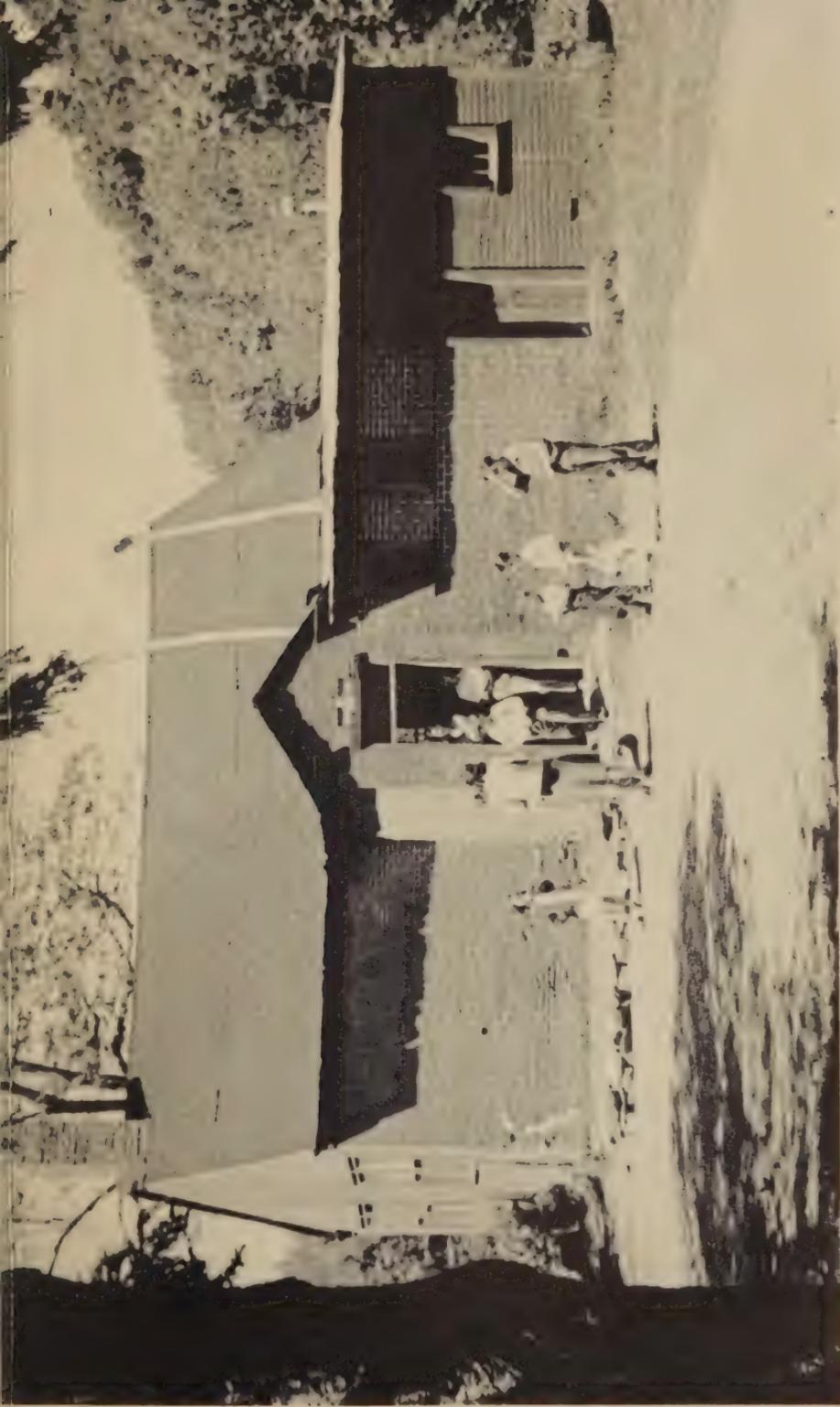
"In twenty-five states children have no substantial improvement of protection in hazardous occupations. . . .

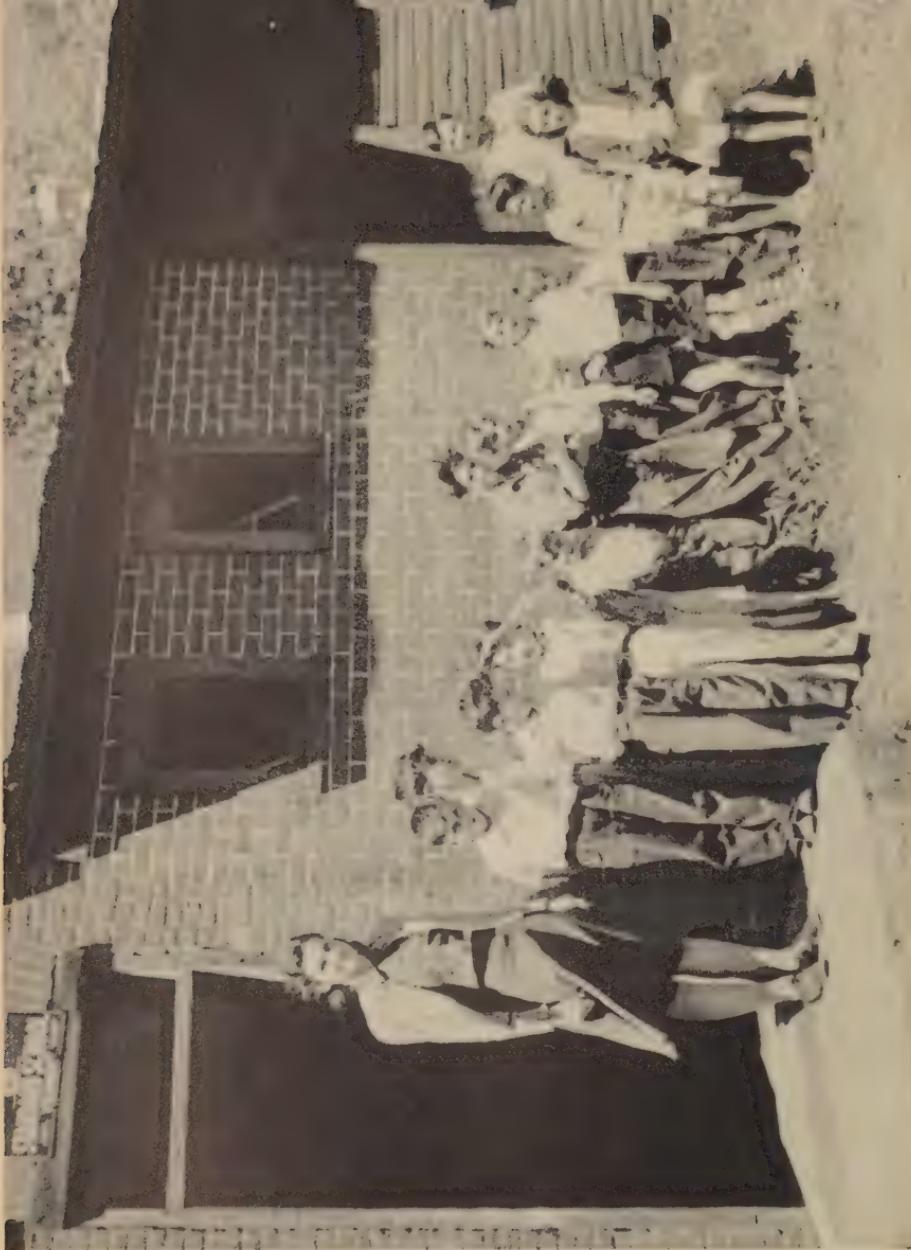
"Most of the child and youth problems are created or intensified by the poverty of two-thirds of American families. . . ."

Instead of expressing fear of Nazism or Communism from abroad, the report points to the despair of our three to four million unemployed youths and adds this warning: "Every year sees more added to the hosts . . . Under such conditions of extensive unemployment, ambition is destroyed, resentment is aroused and anti-social behavior may result."

Iris Woolcock

VERMONT SCHOOLHOUSE





During 1935-1936, in over 30,000 school districts having about 3,000,000 children, the school year fell short of completion by an average of three months. Some 2,400 schoolhouses were locked up entirely and at least five times that many would have been locked up if the teachers employed had demanded full payment of their salaries.

In a sparkling treatise on crossroads schools, Farnsworth Crowder² offers this highly effective preamble:

"The remark so often passed upon Christianity might be used in defense of universal public education in the United States: Let's not condemn it until we have tried it!

"Those who engage (as who does not?) in larruping the schools should be reminded occasionally that the schools have not had a fair show with the majority of our adult citizens. It has been figured that if the 75 million of them were divided into average groups of seventy-six individuals, two only would be college graduates, ten high school graduates and thirty-two elementary school graduates and thirty-two graduates of nothing. It must be remembered, too, that such schooling as many of the seventy-six received was had years ago in a world which—given the pace of recent historic change—seems almost antediluvian.

"But whatever the measure and quantity of their formal schooling, we can be quite sure that the majority of the 75 millions wish they had had more of it. For we Americans play beautifully into the hands of the Alfred Adler psychology which holds man's chief driving force to be the desire for advancement and superiority; and as an instrument of that desire we rate schooling very high. The blacksmith's son with a college degree can become president of the First National Bank

"But we must speak relatively and, so speaking, we come to two conclusions: first, that there are sections of the nation (chiefly prosperous metropolitan suburbs and small cities) which supply public education in abundance; but, second, that a universal public education—first grade through high school—does not yet exist generally over the United States.

"This is not to say thousands of children voluntarily quit school before the twelfth grade; it is to say something a lot worse—that thousands of children can't finish the eighth grade, let alone the

twelfth, even if they want to. There isn't any eighth grade or twelfth to finish. Or even if there is, the quality of instruction offered, in numberless cases is, by all standards, too poor a quality to rate as education."

There is no intelligent reason for the accusing-finger, ain't-it-awful exclamations about rural-school paucity in poor states. The per capita taxpaying ability of Massachusetts, for example, is perhaps six times that of Arkansas. Birth rates and youth ratios are frequently highest in poor land areas. Such states as Arkansas and Mississippi could probably appropriate every penny of all their taxes for public education and still not attain national averages in rural schools. According to the National Resources Committee, farmers of the southeastern states have to support more than 13 per cent of all United States children between five and seventeen, but receive only 2.2 per cent of the national income.

Negro youth in rural areas is especially handicapped by lack of available schools. The United States Office of Education estimates³ that about one million Negroes of high-school age are not in school.

"In two states—Arkansas and Mississippi—only 4.7 percent of the Negro population of high school age are actually enrolled in high schools. In five other Southern states the percent is below ten. In fifteen Southern states there are 230 counties having a population of 159,000 Negroes of fifteen to nineteen years of age who have no high school facilities whatever. In the same states there are 195 more counties, with nearly 200,000 Negroes of high school age, which have no four-year high schools for Negroes."

This is a tragic situation made the more tragic by remembering that rural youth throughout the country, regardless of race, creed, or color, proves itself eager to attend grade schools and high schools wherever and whenever such schools are available. But as a whole rural grade schools remain deplorably insufficient. This is well proved by the ratios of illiteracy among rural youth. In 1930 about one in twenty rural farm youths of fifteen to twenty-four years of age were illiterate. The comparable proportion for urban youth of the same age is about one in one hundred. In the South Atlantic states over 8 per cent of all rural and farm youths between fifteen and twenty-four were illiterate.

To be sure, illiteracy is not a final proof of the failure of cross-

roads school. Consider Wisconsin—a good average state in matters of education. A 1936 report by E. W. Kirkpatrick and Agnes M. Boynton of the University of Wisconsin, tells that in five counties of that state 71.3 per cent of the young men on farms, twenty to twenty-five years of age, had not completed any study above the eighth grade. The figure for young farm women of the same age is 60.2 per cent. In the same counties corresponding percentages for village-raised young men was 30 and for village-raised young women 21 per cent.

Poor schools and poor soil go hand in glove. Here, for example, is a listing of school progress in seven rather typical submarginal counties of the United States: Lumpkin County, Georgia; Jackson and Wolfe counties, Kentucky; Macon County, North Carolina; Monroe County, Tennessee; Mercer and Pendleton counties, West Virginia:

GRADE COMPLETED BY OUT-OF-SCHOOL YOUTH IN 7 SUBMARGINAL COUNTIES

Age	Total		Grade Completed									
	Number	Per Cent	3 or less	4	5	6	7	8	9	10	11	12
Total.....	1,165	100.0	9.3	13.4	13.1	18.2	23.7	15.7	2.6	1.4	2.3	0.3
16 years....	381	100.0	13.6	15.8	13.1	16.5	22.3	14.2	2.1	1.3	0.8	0.3
17 years....	413	100.0	8.7	13.8	13.6	18.4	25.7	14.3	1.9	1.5	1.9	0.2
18 years....	371	100.0	5.4	10.5	12.7	19.7	22.9	18.9	3.8	1.3	4.3	0.5

Source: Computed from schedules provided through the courtesy of W. H. Gaumnitz, U. S. Department of the Interior, Office of Education, Washington, D. C.

It is true that all school enrollments—rural, urban, and in-between—are rising during the continuing era of depression. But this truth is not invariably encouraging. In terms of public schools mere increase of enrollment without increase of revenue, or improvement in organization fails to better the worth-whileness of a school, and frequently mars its competency.

The unfortunate truth stands that our rural schools are entirely too much inclined to be mere puny imitations of stronger, better-run city or town schools and that the final effort of too many country schools is that of “educating” youth away from the farm rather than toward the farm. The fundamental of the local academy, forerunner of common schools of the nation, was that of enabling

local youth to be graduated forthrightly into closely adjoining worlds of growing fields, stores, or shops, or whatever catalogue of trade was preponderant to the immediate countryside.

It is not my intention to heap praise upon the vanishing countryside academy. But it is my conviction that an actual majority of rural schools are still that only in name, and not in actual functioning. For example, less than 40 per cent of rural high schools of the United States teach vocational agriculture. It is estimated that not more than 15 per cent of farm boys fourteen to twenty years of age and now in rural schools are being reached by any kind of training courses in agriculture. A survey of seven southern states suggests that high-school courses in vocational agriculture are there filling only about half of the proved needs for such courses. However, the number of federally aided agricultural high schools has recently increased to more than 7,000, and this number continues to grow.

The latter development is tremendously encouraging. So are the growth and progress of such nation-wide youth organizations as Future Farmers of America, whose members include about 150,000 farm boys between fourteen and twenty-one, youths enrolled in, or newly graduated from, vocational courses in farming.

Local chapters encourage practical farm applications of schoolroom "theory," aid in exhibiting and selling improved crops and livestock, and in facilitating happier social lives. A parallel organization, New Farmers of America, fills a similar purpose for some 50,000 Negro boys now enrolled in the approximately 600 federally aided Negro high schools of the United States.⁵

Country schools, like all other public schools, face the reality of regional concentrations of poverty and wealth. In the United States as a whole assessed wealth per child of school age ranges from \$3,000 in Mississippi to more than \$23,000 in Massachusetts. But income contrast between school districts in a given state or county are virtually without limit. Farnsworth Crowder writes about the public schools of Iowa where the richest district has 275 times as much wealth per child as the poorest. Fortunately the contrasts of country-school competency is not so vast as contrasts in country-school resources. The President's Advisory Committee on Education

recently pointed out that "It is to the credit of the states of low financial ability that with few exceptions they rank at the top in the percentage of their tax income devoted to schools."

The Roosevelt administration has visited country schools with a new high of federal aid—a quarter of a billion dollars for school buildings in rural districts and small towns. Rehabilitation loans, the Civilian Conservation Corps, WPA teacher projects have lately provided hundreds of thousands of rural children the chance to go to schools where otherwise there could have been no school.

It is obvious that such "emergency" assistance is only a temporary approach to what stands as an almost nation-wide quandary in rural education. In the field of public education many voices are urging further increase of federal government participation in public school administration, particularly as regards the support of country schools. Avalanches of statistics tell us that public education is nowadays becoming a product of interstate commerce. By the million country people gravitate toward town schools and roving armies of migrants tether their hopes on any schools which can accommodate their youthful dependents. Most definitely any uniformity in school opportunity has ceased to exist.

Apropos are some comments of the President's Committee on Education⁶ as offered in 1938: "We must deal with a situation in which for American youth opportunity is a birthright attached to certain families and certain geographic areas. A child born in those favored places has opportunity plus; one born outside has opportunity minus.

"For equalization purposes, the most efficient taxes are federal graduated taxes on income and estates . . . collected chiefly in the richer areas. By . . . appropriation the monies then raised can be transferred to the areas in need.

"The necessities of the people require the Federal government to assume increasing responsibilities for education . . . by providing services of information, research and leadership . . . by [engaging] in the direct operation of mixed welfare and educational enterprise [such as the CCC] and finally by [providing] financial assistance . . . in order that opportunities may be greater and . . . more suitably distributed."

In all it is a wishful report and a laudable report, to which no

professional politician could be reasonably expected to give enthusiastic assent.

Yet co-ordinated and durable federal support for underprivileged common schools is a cause and an obligation which must eventually be assumed by the national government. It may prove bitter political tea; a hazardous initiative for any progressive group or individual in Congress. In this onlooker's opinion the move is definitely in the cards.

Actually federal aid to public schools in the guise of "vocational education" has grown steadily and rapidly since 1918, despite the fact that all federal funds for vocational education must be matched by state or local tax money, and that such federal moneys cannot be used for building or equipping schools. Nevertheless, enrollment in federally aided schools is now almost two million children, almost half of whom live on farms. The increase and classifications of federal aid to common schools are indicated by the following tables:

ENROLLMENT IN FEDERALLY AIDED SCHOOLS OR CLASSES BY YEARS

Fiscal Year	Total	Agri-cultural	Trade and Industrial	Home Economics	Fiscal Year	Total	Agri-cultural	Trade and Industrial	Home Economics
1938....	1,810,150	460,876	685,804		1930....	981,882	188,311	618,604	174,967
1937....	1,343,644	386,302	580,905	377,437	1928....	858,456	144,901	537,611	175,944
1936....	1,255,861	343,809	537,151	374,901	1926....	753,418	109,528	466,685	177,205
1935....	1,178,896	325,685	503,865	349,346	1924....	652,594	85,984	409,843	156,767
1934....	1,051,000	286,150	466,999	297,851	1922....	475,828	60,236	296,884	118,708
1933....	1,032,403	264,105	489,900	278,398	1920....	265,058	31,301	184,819	48,938
1932....	1,077,844	252,199	560,150	265,495	1918....	164,183	15,450	117,934	30,799

ENROLLMENT BY STATES, FISCAL YEAR 1938

Alabama.....	46,543	Kansas.....	26,135	N. Hampshire.....	1,826	Tennessee.....	50,912
Arizona.....	6,224	Kentucky.....	20,744	New Jersey.....	32,677	Texas.....	137,765
Arkansas.....	42,530	Louisiana.....	41,032	New Mexico.....	5,387	Utah.....	21,270
California.....	145,772	Maine.....	3,444	New York.....	182,131	Vermont.....	2,144
Colorado.....	22,290	Maryland.....	13,877	No. Carolina.....	57,756	Virginia.....	35,259
Connecticut.....	13,343	Massachusetts.....	49,794	No. Dakota.....	8,117	Washington.....	23,158
Delaware.....	5,468	Michigan.....	56,778	Ohio.....	67,420	West Virginia.....	14,185
Florida.....	32,876	Minnesota.....	23,673	Oklahoma.....	43,931	Wisconsin.....	70,267
Georgia.....	87,869	Mississippi.....	46,357	Oregon.....	15,337	Wyoming.....	5,605
Idaho.....	5,365	Missouri.....	32,029	Pennsylvania.....	79,983	Alaska.....	687
Illinois.....	49,494	Montana.....	5,696	Rhode Island.....	3,546	Hawaii.....	9,872
Indiana.....	42,898	Nebraska.....	24,572	So. Carolina.....	48,102	Puerto Rico.....	14,086
Iowa.....	24,253	Nevada.....	2,464	So. Dakota.....	6,624	Dist. of Col.....	583

Federal expenditures for vocational education have meanwhile climbed from \$6,833,000 in 1920 to \$42,000,000 in 1940, while federal aid to teacher training has risen from about \$125,000 to more than \$3,500,000 yearly during the same twenty years.

In the United States there are at least 30,000 country schools which do not have incomes sufficient to pay living wages to their teachers. Throughout the nation the average annual salary of the country schoolteachers is slightly less than \$500 per year. In only five states is the average in excess of \$600; and in eighteen states it is less than \$250. United States Office of Education statistics suggest that between 10,000 and 14,000 rural school districts are now paying teachers' salaries in deferred vouchers, or warrants, which must be further discounted when and if exchanged for cash.

How does one acquire capable career teachers at salaries of around \$50 a month for seven to nine months a year? The reasonable answer is that one does not: that so long as semistarvation salaries characterize country schoolteaching, most country schoolteachers will remain just as the majority are today and long have been—either local citizens who take a brief fling at teaching prior to becoming housewives, career farmers, or entering other more permanent trades; or ambitious young men and women who teach a year or two in an effort to save a little money with which to follow further studies; or qualified teachers who are temporarily jobless and therefore teach country schools only until better jobs appear; or members of farm families who choose to live at home and spend off seasons away from farming; or (by odds the biggest group) the has-beens, duds, second-, third-, or fourth-raters who teach country schools because they are admittedly not qualified to teach in town or city schools. There are fortunate exceptions to these catalogues, but for the most part exceptions merely prove the rule.

There is the more or less consistent truth that being overburdened with obligations and plagued with habitually thin purses, the country school must struggle all the harder to serve and survive. Growth and progress of the consolidated school district, where several townships or school districts pool resources and operate a centrally located school to do the work of from three to twenty one-room or two-room schools is a distinct trend of the rural times. The seeding and flowering of these consolidated schools is one of the most hopeful omens in rural education today. Better buildings and equipment, more space and more capable separation of classes and grade groups tend to raise competence and lower overhead.

It is human nature and routine functioning of a comparative democracy that politics should play too big a role in the formation

of consolidated units of schools and that wishful thinking and misguided grandiloquence too often result in top-heavy appropriations for buildings, school buses, and equipment, thus leaving only a nicked penny for pay of teachers. On the whole, however, the widespread move toward consolidation of rural schools is definitely encouraging. The expediency of consolidation, or of any other progressive course in rural education, cannot be expected to solve all the problems of this essential rural service. The barricades of poverty remain real and will almost inevitably be so for decades, even generations, to come. But there are still great and durable fields for improvement of rural education; better and cheaper textbooks; more and better school libraries and circulating libraries; more manual training shops, practice kitchens, and practice fields; closer study of needs, resources, and problems of the immediate countryside.

Speaking of better use for slender resources, it seems to me that our many thousands of malnourished country schools might be the best possible test arena for new inexpensive ventures in popular education by radio.

For the constructive genius of radio (if it really has any) is primarily a genius of utility. Thus far the work of radio has been concerned with synthetic versions of mass entertainment, music for the multitude, would-be mirth for the man or woman of everyday as dispensed by a hoodlum menagerie of corny comedians, news of the day and hour sandwiched into blatant advertising, and so on.

Taken merely as a channel of communication, radio is by odds the most far-reaching and efficient yet employed by man. But the work of radio transcends communication. It is greater than would-be amusement. The new work of radio seems to be groping toward still another enterprise. As an onlooker I believe radio's newest and greatest field is destined to be that of education.

After some months of watching the work of radio, my attention is drawn to one man of the microphone whom I personally regard as the most significant radio worker in America today. His name is little known. He is not attached to any commercial program. No "popularity poll" of radio has yet mentioned him. Yet this man is an outstanding pioneer in the new field of radio education. He is taking radio as a platform and stage for teaching music to the nation at large.

The teacher's name is Joseph Edgar Maddy. He is a pleasant, middle-aged citizen who has taught the biggest music class in the history of the world—somewhere between 200,000 and 500,000 pupils, most of them farm people, ages ranging from four to ninety.

Maddy is the originator of music lessons by radio. He calls the lessons "Fun in Music" and invites all musical beginners to choose their own instruments and take an easy plunge into playing. He writes instruction books for about twenty instruments, as well as for voice.

One of the Maddy pupils, I learn, is a grandmother of eighty-four who is learning to play drums. She says it's fine exercise—excellent for warding off colds. Another is a traveling salesman who says he stops his auto during the lesson time, takes his flute out of the dashboard pocket, and absorbs his music lesson at the side of the road. But the great majority of them have been farm children.

A Pennsylvania farm mother has started a family orchestra by radio and reports that it is the best move she ever made to keep the children home at night. The herd manager of a big Wisconsin dairy farm is learning to play the cornet by radio. He is a family man in his middle forties, one of the millions who always wanted to play an instrument but never got around to doing it. Joe Maddy knows that the great majority of his listeners cannot afford to take music lessons by the usual procedure. The purpose of the Maddy broadcast is merely to make music available to radio-listening multitudes who are too busy or feel that they are too old to take regular music lessons or who live in communities without music teachers. The invisible "classes" have included listeners in every state, every province of Canada, and in twelve foreign countries.

When I first heard of Maddy's work I was profoundly curious to see the man. I found him a rather handsome, large-headed gentleman of medium height and in his late forties. His bushy black hair declines to stay combed and before he can say a dozen words a long cowlick begins showing at his right temple.

I found further that he is a farm-raised Kansan; that he usually sheds his shoes immediately after supper; that he is a renowned music teacher who forgets to send out bills and even forgets to cash his salary checks until weeks or months after receiving them; that he is one of America's first great saxophone players; the origi-

nator of the metal violin and cello; founder of a famed music-study camp; and a former member of two famous symphony orchestras.

Sometimes a single word can give the key to a given character. With Joseph E. Maddy, I believe the key word is "crusader." He has been crusading for music since down on a Kansas farm, at nine, he learned to play the harmonica. For almost forty years, he has been leading this same crusade, considering music among the greatest of mortal birthrights.

Many other crusaders of one kind and another have come out of Kansas. It may be something in the drinking water. As a boy, Joe Maddy had vague ideas of becoming a salesman or peddler. But his mother encouraged his liking for music. When he was sixteen she bundled him off to Bethany College at Lindsborg, Kansas. Next his family sent him to the Columbia School of Music at Chicago.

Meanwhile, just for the fun of it, Joe had mastered a newfangled horn called the saxophone. Those were the days when "Alexander's Ragtime Band" marked the birth of what we now call jazz. Joe Maddy found a job in Chicago playing the saxophone in a cabaret. He kept his job for almost two years. Then he heard that the Minneapolis Symphony Orchestra was in the market for horn-blowers. Joe went to Minneapolis and tried out for clarinet. He also took an audition for viola. He passed both tests and landed a double-berth job.

The life of a symphony musician (so I am told) can be one of the most serene known to man. In a symphony your job is to play great music well. You live in an ivory tower of "sweet harmonies." Joe Maddy liked it all except the ivory tower. He wanted his feet on the earth, and to mix with real, everyday people. After six melodious years, Joe Maddy became school music director for Richmond, Indiana. There he organized a symphony orchestra of seventy pieces in the high school, the first fully staffed high-school symphony in the United States. The next Maddy inspiration was to equip and open a national summer camp for high-school musicians. In the summer of 1928 he began Camp Interlochen, Michigan, as a nonprofit summer study camp for boys and girls. Young musical hopefuls came. The camp grew until now it accommodates about five hundred school children. More than a hundred other music camps have risen in imitation. More than fifty

thousand organized school bands have now flowered or wilted into reality throughout the United States.

Next Maddy became professor of music education at the University of Michigan. At Ann Arbor he opened still another crusade; this one to introduce music into more country communities and into more small rural schools. One after another, he visited hundreds of country schools and farm clubs, driving three or four hundred miles a day, speaking, playing, and teaching in as many as twenty different country villages between daylight and midnight.

In one community, he persuaded a group of farm mothers to present a piano to the country school. To do this, he organized a chicken raffle. Parents donated fifty hens. Joe Maddy auctioned the hens and used the money to buy a secondhand piano for the school. He started another class with a contribution of twelve dozen setting eggs. In a country town of a thousand people he raised, coached, and organized a 53-piece band and orchestra.

Those were the late twenties, when radio was first coming into its peculiar flower. Driving home one night Joe Maddy was struck with a tremendous idea—to teach music by radio—free lessons for everybody in the country, or in the world, who wanted them. Panting with excitement, Joe stopped his car in the middle of the highway. Traffic honked and a milk truck almost smashed him. Next day he presented his plan for radio music lessons to the university music faculty which had listened in doubting boredom to Maddy's plans for a national music camp. Once more, in a genteel and cultured manner, the faculty said no. Maddy appealed his case to the Carnegie Corporation, purse-holders of the famous Carnegie Foundation, and applied for a grant to teach music and organize country bands by radio. The Carnegie committee said yes and granted \$100,000 to begin the work.

It was an entirely new technique in music education. The amiable crusader from Kansas mapped out an ether-wave semester of seventeen lessons and lined a small band behind the microphone to demonstrate what he taught. He invited a group of beginning pupils to come to the studio for the lesson hour. He seated the beginners in a studio room which was separated from the microphone by means of a wall of glass, which blocked all sound but left the class in view.

By watching the beginners' fingers, he could tell how they were progressing and when they were hitting the wrong notes. He put an amplifier in the big glass cage and corrected all the mistakes he noticed, speaking directly from the microphone. Thus he could see beginners at practice while speaking to invisible pupils.

Bit by bit, the radio music lessons began to be noticed. They were adopted as curriculum in hundreds of country schools of Michigan. Within a year these country schools alone provided more than thirty thousand ether-wave pupils, and more than three thousand letters received during the first course suggested at least that many home students. The superintendent of Chicago public schools endorsed the Maddy lessons, and school systems throughout the Midwest began to follow suit.

Late in 1936 the National Broadcasting Company invited Maddy to supply half-hour weekly lessons for national hookup with the company's compliments. Maddy accepted the offer. Handfuls of fan mail grew to bags and mountains of mail. Before the end of the first year letters had been received from newly fledged radio music students in every state. Maddy added piano and voice lessons to the long list of band instruments.

Joe Maddy is supremely happy. He believes himself a pioneer in the greatest frontier of American education; one of the first teachers in the great new school of radio.

He may be right. There is increasing reason to believe that entertaining or casual instruction for the common citizen is the most probable goal of American work in radio. After a rambunctious decade of trial and error in broadcast, radio now learns that it cannot stand securely on the mere thin blarney of advertising; or upon windy gusts of now-related "entertainment" such as trivial dance bands or other transient novelties in music; or upon the gags and jests of vaudeville-style comedians who must inevitably grow stale; or upon the barking of "predigested" news. Juvenile show-off that it is, radio has thus far spent most of its energies in the trite pursuit of yelling for attention. It has filched, stolen, lifted, plagiarized, and otherwise taken from the legitimate theater, the motion picture, the night club, the dance hall, the daily newspaper, the current book or magazine, the printed advertisement, the lecture platform, the sidewalk, the pulpit, and the tent show.

Now that radio begins to study itself, its work gives promise of

becoming a notable adjunct of teaching. There are many subjects which radio is particularly well adapted to teach: subjects of essential importance in modern education, yet consistently out of reach of the generality of country schools. Music is a good example. I believe that freehand drawing and essentials of color painting could be others. So could child's appreciation series—for study of native birds and animals, reading, history, poetry, American government, and languages; also interesting generalities in farm living and the husbandry of crops and livestock.

During daytime hours and without insult or nausea of advertisements country-school lesson series could be broadcast from local stations at minimum cost. State departments of education could prepare and broadcast the lesson lists for the benefit of all schools desiring them. In many instances it would be possible to enact regional broadcast covering school needs of several neighboring states. The expenses would be but a slight fraction of those normally incurred by commercial broadcast. Sparse curricula of crossroads schools could be beneficially supplemented by numerous and valuable courses beyond the ken or the scope or the time of most rural teachers, whom it could effectively help in broadening the range of rural education. Radio receiving sets are, of course, available for a few dollars.

Nowadays the mission of the country school is one of preparation for work; for more valid use of land and resources of land which men have misused or which government has evaded. Preparation for country life of tomorrow must be specific preparation for productive work.

For the American will to work is the one dominant national mood of today. The American will to work defies all boundaries of locale or section. We are working people, and we have little inclination to make apology for idlers.

The Englishman may aspire and grow to a "profession" of leisure. The Frenchman may respond to his traditional urge to retire within his garden walls and meditate in tacit disregard of all productive activity. The German may spend a tramping, back-packed lifetime in creating a militant treasury of sanguinary daydreams.

But the majority of North Americans cannot concede leisure as sufficient occupation. We do not find habituated disregard of produc-

tion a satisfying way of life. Actually, work has come to mean vastly more to us than sources of livelihoods. It has come to be our foremost stabilizer of interests and enthusiasms, an enduring groundwork for friendships, acquaintances, and associations. Through war or peace, depression or prosperity, most of our people revere work.

Thus "What does he do?" remains our most prevalent personal interrogation today. The staple American definition of work tends to remain the same—application of muscle, energy, or intelligence or a combination of all three on a given material for the production or improvement or distribution of goods. We are a stupid people at country clubs, Junior League bazaars, or beach resorts. By implication and connotation our newspaper society pages are far funnier than most of the comic sections and notably less endearing. At the theater or corner movie we are likely to be a trite people.

Yet at work America is still heroic. When at work—in offices, shops, stores, laboratories, or on farms, America swings into truest tempo. It is then that we find sincerity and purpose. Indeed, we play best when the play itself becomes work, and we study best when scholarship and work become identical.

From a standpoint of history the "basic" trades of America are fishing, timbering, fur trapping and fur trading, and farming, all salient trades of a frontier. Conservation is notably conspicuous among American concepts of work—a growing desire to save for future Americans some portion of the resources which our fathers and grandfathers had for the carefree taking, as an urge to maintain the semblance or the reality of a frontier of work.

To a considerable degree our genius for work remains a frontiersman's genius. But our methods of work must change with the evolution of frontiers. Our first frontiers could afford vast wastes and extravagances. They could afford to countenance gory and unnecessary guerrilla wars. They could (and did) tolerate fraudulent railroad promotion, usurious banks, dishonest exploitation by wholesale. They could afford (at least for a time) to allow any employer the right to bludgeon labor, however damaging the bludgeoning to buying power, living standards, or the success of other employers. For so long as the nation was young men could escape the more flagrant tyrannies of cities merely by attaching themselves to new

land or otherwise claiming a share of earth's crust in their own rights and names.

Today our home frontiers of work lack such grandiloquent leniency. Their challenges include those of greater skills, improved leadership of labor, better management of productive time, improved marketing, better planning of employment. The working American continues to absorb much knowledge and more doubts. He has learned, for one thing, that our "peerage" of wealthy families has substantially failed to live up to the obligations of wealth. He has been wearied by the propagandas and counterpropagandas of "high capital." With good reason he has come to question the gospel qualities of the printed word. His appetite for political "reform" is almost saturated. He has come to view the militant totalitarian, whether Nazi, Fascist, or Communist—indeed, the ism vendor at large—as threatening his security in work.

But love of productive land remains basic to the American genius for work. Though the trades of agriculture grow more difficult and more perplexing with each passing season, farming remains our vocation of maximum numbers, and its destinies were never more intimately related to the present and future solvency, or insolvency, of the little red schoolhouse.

Chronic problems of the country school grow more and more acute with the dilemma of unwanted youth. In the United States of 1940 are more than 21,000,000 youths, sixteen to twenty-four years of age. About 10,500,000 of these live in rural areas and about 7,000,000 live on farms. For at least twelve years past youths have been "piling up" on home farms, selling their labor and time for little if anything more than barest subsistence. Since 1932 at least 2,000,000 of these young country people have been members of households receiving federal "relief."

During these years rural communities have become still further disorganized. In general such institutions as farm clubs, rural churches and Sunday schools, and other organizations traditional to the countryside, continue to grow weaker as the automobile, motion picture, radio, and a hundred other magnetic or distracting forces of modern living conspire to break apart older units of rural society and to challenge the formation and furtherance of new.

But the really compelling and long-time problem of rural youth

is that of having several million more young people on farms than there are specific opportunities for placing. Under present bounds and definitions American agriculture cannot begin to absorb all the young people who are now on the farm. When and if there are no adequate opportunities for countryside employment, a huge part of the work of farm education becomes blotted into futility.

Despite the decline of the national birth rate, we have more boys and girls than ever before. For youth testifies to the birth rate, not of today, but rather of twelve to twenty-five years ago. Since 1930, according to the census, the American birth rate of towns and cities (of 10,000 or more) is not sufficient to replace the populations of those towns and cities. Larger cities show a deficit of 20 per cent, or more, in numbers of children. In New England and the states of the Pacific Coast—in twenty cities with populations between 25,000 and 50,000; in 74 cities with populations between 10,000 and 25,000; in 12 cities with populations between 50,000 and 100,000, and in 6 cities with population of more than 100,000—death rate actually exceeds birth rate. Yet in rural America at large there is apparently a 50 per cent surplus of children—in terms of available solvent farm lands.

In the past, ownership of land has been the real measuring stick for the economic security of rural America. If we choose to retain this measuring stick, it is for us to concede that almost half of all farms in the country have lost their economic security along with the poor man's proprietorship. We see a steady increase in percentages of farm tenancy, an increase which has been clearly evident for the past forty years.

Obviously rural youth of today looks to the future with the hopes of getting off-the-farm jobs if ownership of land stays within the realms of the impossible. Since less than a third of the rural boys and girls have opportunities for attending high school, since barely half are graduating from grade schools, their chances to prepare themselves for nonfarm jobs seem ironically scant.

Increasing throngs of rural youth find less to do with their productive energies and their leisure. The latter dilemma is accentuated by the extreme anemia of the rural church. In this connection, Mr. Bruce Melvin makes a pertinent summary:⁷

"The church performed a distinct function as a social and recreational institution. . . . Young people went to church and attended

church suppers and other events in order to be together. Seasons of protracted meetings provided the approved social and psychological settings for the association of the sexes. The spelling bees of the school, the programs of the old literary societies, and the special activities of the Grange were all very important in the lives of the youth. In a social and recreational way the community was a closed corporation. Its standards of conduct brooked little variation; the behavior of individuals followed socially approved patterns . . .”

Not more than one-fourth of the rural population of the United States has opportunity to use public library services.⁸ According to the American Library Association there are now about three hundred tax-supported county-wide library systems serving citizens in open country and country village. There is evident need for at least fifty times as many rural libraries. The truth is that throughout rural America as a whole “cultural privileges” are perhaps even scantier than they were a century ago. Too many millions of farm boys and girls must look to towns and cities for their social life and recreation.

There is real encouragement in the fact that more and more governmental agencies are paying heed to the many needs of young folks on the farm. From a standpoint of seniority in service to rural youth is the Co-operative Extension Service of the Department of Agriculture, affiliated with land-grant colleges and universities, state agricultural colleges, and federally aided high schools throughout the nation. The Co-operative Extension Service centers its work for farm youth into 4-H Club programs for boys and girls between ten and twenty-one years of age. Membership now totals about a million boys and girls who live on farms. This is an impressive enrollment and an impressive enterprise. Yet the membership is only about 8 per cent of the boys and girls on farms of the United States and less than 3 per cent of farm youths of sixteen and over. During the past two years about two hundred special 4-H Clubs have been founded for farm youths of sixteen to twenty-five.⁹

Federally aided high schools with courses in vocational agriculture continue to promote extracurricular leadership in agricultural education—night courses or out-of-school classes for rural boys and

girls not attending schools. Courses include instruction in farming, in farm shopwork, and in community activity.

Since 1933 agencies of the Roosevelt administration have variously supplemented this outstanding youth service of the Co-operative Extension Service of the Department of Agriculture. One of these addenda is the National Youth Administration, founded in June, 1935, for the primary purpose of assisting young people on relief. The NYA gives aid "upon a work basis" to boys and girls between sixteen and twenty-five who otherwise lack means for attending high schools or colleges. Local school authorities select the youths and supervise the work, for which the students are paid. During 1937 NYA grants reached a maximum of about 444,000, about 280,000 of whom were attending high schools; the rest, colleges.¹⁰

During 1937 the National Youth Administration, co-operating with the Department of Agriculture and various state agricultural colleges, launched an educational program designed for young people who are out of school. This is a nation-wide resident-training "project" by which boys and girls from poor farm families are enabled to spend from six weeks to six months of the year in agricultural colleges earning their living while studying farming or home economics.

The director of the National Youth Administration explains the latter experiment as follows:

"Approximately half of each student's time is devoted to work on projects established in connection with the schools. These consist of various forms of construction work about the school property . . . Students earn a monthly sum not exceeding one-half of the Works Progress Administration security wage prevailing in the region, but sufficient to cover their expenses for room, board, medical care and equipment. In addition, they earn from \$5 to \$10 a month with which to meet personal needs . . . To reduce costs to a minimum, the students co-operate in doing most of their work in connection with their living arrangements, in some instances raising a considerable portion of the food.

"The students are selected with the assistance of the local county agents and vocational agriculture instructors. Because many of the students selected have had less than a high school education the bulk of the training is given through demonstration methods

in such fields as farm practices, soil conservation, soil chemistry, dairying, poultry raising, crop diversification, and care of farm equipment. Girls are trained with a view of instilling certain standards of home maintenance and are instructed in personal hygiene, cooking, marketing, home gardening and food preservation. The course of study is reduced to as practical terms as possible, and methods of instruction are informal."

These experiments are still young and from a census standpoint their scope is still tiny; a mere drop in our great and noticeably disturbed ocean of rural youth. But the drop is of significance in terms of what may be done during times yet to come.

The same may be said of the Civilian Conservation Corps, which materialized out of the discouraging fog of extreme depression. Initiated in 1933, this corps was created originally "for the purpose of relieving the acute condition of widespread distress and unemployment . . . and in order to provide for the restoration of the country's depleted natural resources and for the advancement of an orderly program of useful works . . ."

Congress enacted the law creating this corps without specifying the ages of its personnel or the exact distribution of its strength. But from the beginning the Roosevelt administration has emphasized the place of youth in the corps, specifying common age limits of seventeen to twenty-eight years, except for World War veterans, whose number may not exceed 10 per cent of the total enrollment.

Since July 1, 1937, the enrolled strength of the corps has been limited to 300,000. Further reductions are being made during 1940. Yet by the beginning of 1940 about two million unemployed and unmarried young men, representing every state, had been enrolled in camps of the CCC. About three-fourths of these have been youths under twenty-one; about 36 per cent have come from farms, and approximately three-fourths have come from open country or from towns of less than 25,000 population. The maximum enrollment period is two years; the average enrollment is between nine and ten months for white boys and between twelve and sixteen months for Negroes.¹¹

From the beginning of CCC, vocational training and formal schooling have continued as its basic activities. During the past seven years at least 70,000 of the enrollees have been taught to read

and write; about 600,000 have taken work in grade-school subjects; about 500,000 have received high-school instruction, and perhaps 60,000 have received college study.

Administration of the CCC has not been flawless. It has suffered from abrupt lurches and ebbs of federal policies. It has suffered still more from malodorous Congressional politics. Yet in many ways the corps is a significant attainment in American direction of youth—young men of farms, towns, and cities alike. So, too, is the work of the Educational Division of the Works Progress Administration, which has teamed with state boards of education and local educational authorities to make part-time schooling and study available to millions of youths and adults, of both town and country. So, too, are the valiant though still limited efforts of the Farm Credit Administration to help young men begin farming.

Under supervision of the latter agency are about five hundred production credit associations which are authorized to lend money to farm boys desiring to finance crop and livestock production. Actual number of these loans is still tiny, probably no more than 5,000 for the entire country. But the enterprise shows distinct promise. So does the Farm Credit Administration plan for choosing capable students from classes in vocational agriculture and giving them the opportunity to rent, with option of eventual purchase, at least some of the hundreds of thousands of farms which are now coming into the hands of the administration by process of foreclosure.

Other agencies, private as well as governmental, are working determinedly and sometimes ably to help remedy the nation-wide quandary of rural youth. For example, there is the Junior Farm Bureau, an auxiliary of the American Farm Bureau Federation, which supplements the proved work of the 4-H Clubs and Future Farmers of America in meeting needs for "social, recreational and educational development of rural young people."

Of similar purpose are the Juveniles (for farm children under sixteen) and the Juniors (those sixteen to twenty-one) youth annexes of the Farmers Educational and Co-operative Union which flourishes in the Midwest and wields noteworthy strength in the Dakotas, Wisconsin, Minnesota, Montana, and Oklahoma. These younger members are not required to pay dues to the parent union, yet they have all the privileges of paying members. They are en-

couraged to study social problems and legislation, to enter into essay writing and speechmaking contests, and in some states they are rewarded with free attendance of summer camps.

"The history and methods of co-operation are emphasized, but instruction is also given in the various aspects of economic problems that touch the farmer's interests, such as money, credit, and taxation as well as the conservation of natural resources, handicraft, and social and recreational leadership."¹²

There is also the National Grange, a pioneer farmers' society which offers membership to farm youths of fourteen and over. Membership of the grange totals about 800,000 farm people in thirty-five states, more than one-third of whom are young people under thirty years of age.¹³

Still other strivings to sponsor the cause and needs of farm youth are taking root locally. In continuation of the Danish program of folk schools, the Wisconsin State College of Agriculture provides an annual short study course for young farmers. Term extends from the middle of November to the middle of March. Student ages range from eighteen to twenty-five years with experience in actual farming the only prerequisite for entry. Courses include sociology, business administration, history, and literature, as well as vocational agriculture.

Breathitt County, Kentucky; Douglas County, Wisconsin; Rockland County, New York, furnish noteworthy examples of community efforts to provide better opportunity for out-of-school rural youth. Private adventures in inexpensive education for farm youth include such highly worth-while institutions as the Pine Mountain Settlement School of Harlan County, Kentucky, the Campbell Folk School at Brasstown, North Carolina, and the Ashland Folk School of Grant, Michigan.

All told, the ventures in championship of rural youth are definitely of promise. But to date their energies deal with extreme minorities. Only the meager surface has been touched as all-evident problems of rural youth continue to grow like weeds in June.

Toils and problems of young folks on the farm are not new. They were accentuated by the mad-hatter lunacies of the tumultuous twenties; they have been further accentuated by the devastating poverty of the thirties. A new decade beginning another titanic

brawl which again floods Western Europe with fresh and thinning blood further darkens prospects for American agriculture in general and for our great multitude of tomorrow's farmers.

But the demanding quandaries of American farm youth predate all these calamities. They are as old as the very taproots of American agriculture. During bygone decades they have been alleviated by the reality of free or nearly free lands which a young man could earn and own by virtue of his own brawn and planning. Now good land is no longer to be had merely for the taking. For almost a century our farm realms have been reservoirs for youth which was quickly absorbed by growing cities and expanding industries. Now the pell-mell growth of our cities seems to be finished and numbers of urban jobs appear to fall several millions short of providing work for urban youth.

But farm lands remain the great reservoir of American youth, even as our supplies of fertile lands become even fewer than our supplies of worth-while jobs. So-called "recovery" as reflected by intermittent periods of urban "prosperity" no longer foretells a proportionate "prosperity" for farms. There are today at least a million more young men and young women on farms than there would have been had migration from farms to towns continued during the thirties as it was during the twenties. From the vast mountain of New Deal statistics one gathers that not less than one-tenth of all rural youth of the United States, a million country boys and girls between sixteen and twenty-five, are now "on relief." About two-thirds of these live on farms—the rest in rural villages.¹⁴ Perhaps 40 per cent of these youngsters are attending school, but less than one-fifth have progressed as far as high school. Of those out of school, 55 per cent of the young men and 90 per cent of the young women are listed as unemployed.

To label this situation distressing is blasé. For years to come there is certain to be a continual increase of American population of working age. On the present basis of job opportunity there is an overwhelming probability of continued widespread unemployment. Country boys and girls, possessed of the poorest of school facilities and the minimum of real vocational schooling, are obviously at a distinct disadvantage in terms of job opportunities.

Some can and no doubt will descend to lower rungs of sharecropping. Most of the rest must enter the weary competition for

work as unskilled labor. The enlightened minority may climb, but the vast majority very probably cannot. There is no forthright hope for quick recovery from the maladies of agrarian poverty of the past, or of the present. The tragic incompetence of the little red schoolhouse of yesterday and today is certain to beget social headaches for tomorrow.

6

POOR FOLKS ON THE GO

THE United States remains a nation of horizon chasers. *Homo Americanus* is still a champion of migration and transition. As a people we are still blessed with a distinctive and youthful eagerness that involves an unending urge for exploration and conquest, commercial as well as geographic.

The current nomadic leanings of the American public have several causes besides the trials of home financing. Employment figures show that our traveling population has increased steadily since the World War. Between 4,000,000 and 5,000,000 itinerant laborers travel about to attend harvestings in our concentrated areas of cotton, fruit, truck, and grain crops. We have a rapidly increasing roster of industries with temporary labor needs—highway building and paving, utilities construction, canning, mining, milling, glassmaking, and a score of others. Many thousands of newly ordained roadway wanderers are appearing in every section of the country—jobless laborers, teachers, traders, preachers, and painters, looking for something to turn up; sons and daughters of wanderlust and unfenced destinies.

History, we are told, repeats itself. It is entirely feasible to infer that nomadic peoples the world over have got that way from primary economic causes. Ancient England changed from a nation of self-sufficing farmer-warriors to one of roving shepherds and cattle herders when the Roman occupation gave rise to a demand for wool and beef. Persia and Egypt and rural Carthage turned nomad barterers with the rise of Mediterranean trade. In scores of instances securely placed residential peoples have turned nomad as an immediate aftermath of military conquest, climatic change, or

Iris Woodcock

THE AUCTIONEER



Iris Woolcock

PROUD OF HER TWENTY-FIVE-CENT PURCHASE: BUGGY AND CONTENTS



shifting trade. Our own immediate domestic transition is motivated by a blending of elemental and powerful forces, first among them, perhaps, being an increase in international commercial rivalry.

The situation gives rise to many contemporary paradoxes, among others the fact that little businesses aspire to be big businesses, while big business is yielding to a long-fostered craving to divide itself into little businesses, into trade substations, chain stores, assembling plants, and local branches. Both processes require a notable increase in transiency, which in natural course causes havoc with home owning.

It is rather hard to decide which process is more powerful. The first is easier to describe. Let us take the hypothetical instance of Karson's Krusty Bakery, as typical of the midget industries which would expand. The senior Karson, we shall say, came early into the village of Centerville and established a bakery, a modest shop which he managed for years with his own labor. His trade grew until finally he came to serve the whole of the village and surrounding countryside.

Then complications arose in the form of middle-age ambition. Recognizing the obvious fact that Centerville has a clearly defined maximum for bread and cake consumption, the proprietor reckons that increased trade territory would mean increased volume and increased profit. So Herr Karson responds to the normal American urge for expansion. He buys new and bigger equipment. He buys and rigs new trucks and sales cars and sets forth to canvass baking business in neighboring towns. Trade increases for a time and there arises the need of new help, truck drivers and salesmen and collectors, itinerant and expensive labor. Then competition gets into play. Bakers in neighboring towns resent the infringement on their bailiwicks. They in turn are prone to expand equipment and send canvassers and delivery trucks into Centerville. Thus advertising boundaries crumble; old trade is lost and new trade is gained.

Baker Karson finds that he no longer holds a convenient local monopoly. He must work harder than ever to make a living, and he must spend a large part of his time away from home. Increased distribution makes itinerant labor out of workers who would otherwise be resident. The most immediate local result is that the home life of Centerville is materially diminished.

Or we might consider the plight of Thwadd & Thwadd, Inc.,

foundry operators, who decide to establish a dozen local plants to overcome in part the turmoil of distribution. To begin with, a good part of the executive force must set forth and wander far and long, choosing locations, estimating local markets, dickering for sites, and laboring over initial detail. Then when building is begun a still larger portion of the force must go forth from their established routine and residence. Department heads and labor foremen, personnel workers, legal minions, and sales managers must take to the road and help along with their particular specializations.

When finally the building is done and the subplants are in operation, it is probable that some hundreds of the hired help of Thwadd & Thwadd will be undecided as to where they will make their homes, if anywhere, now that the best half of the force is being wafted hither and thither in Thwadd's far-flung battle line of business. Accordingly, the maintenance of a permanent residence comes to be a luxury out of keeping even with an altogether reasonable pay check.

But we would not paint too bleak a picture of the twilight of the American home. Limiting the connotation of "home" to the typical residential domesticity which held during our own mediary generation, one probably will concede that this beginning era of nomadism has its advantages. The new commercial exodus is giving our people a new strength and, I believe, a new charm. The inevitable fellowship of the road offers a first-rate remedy for isolation and timidity, two of the basic ingredients of snobbery. Just as newlyweds come to learn that much of the real delight of home lies in subjective anticipation, so it may be that our increasing millions of commercial nomads may acquire the true wanderer's delight in anticipation of home, a delight unmolested by sundry realities of domesticity, such as leaky water pipes, falling plaster, and second mortgages, and the almost unavoidable stodginess of long-continued residence.

But the story of contemporary nomadism is also significantly rural. It is, in fact, one of the greatest indexes of agriculture. It is a barometer and measuring stick for rural as well as for urban poverty. Tangled and ambiguous lines of city streets lead directly to the tangled and ambiguous scrolls of roadside America.

Roadside America is a reality considerably maligned and mis-

understood. It is not a mere passing phase. Its itinerancy is as old as the nation.

It is true that the ranks of our informal and generally peaceful army of the open roads are now more than usually crowded with derelicts of depression—men, women, and youths, jobless, homeless, or otherwise unanchored—who take to the road rebelliously or apathetically as the case may be, and join the lackluster camp following or drift of job seekers.

But an army must be judged in terms of its professional soldiery rather than of its new and disconsolate recruits. These recruits have not yet learned the true stride of transiency. Probably most of them never will learn it. They wander in quest of a job or home establishment that will mean no more drifting; they wander to end wandering. Meanwhile, our confirmed and seasoned army of the open road moves on, sons and daughters of rain, sun, and dust, echelons numbering well into millions, their ranks scattered over the millions of square miles that make up America. These proved roadside Americans, these permanent transients, tend to fall into three far-strewn divisions: those who sell, those who work, and those who merely ramble.

No bird's-eye view of roadside America can be complete, or even well started, without mention of peddlers. Thomas Jefferson once reflected, perhaps with his tongue in his cheek, that one-third of the American population spent its time peddling goods to the remaining two-thirds. Some of us remember the old-fashioned peddlers with considerable affection, the vendors of household remedies, greengroceries, Bibles and books, tea, coffee, extracts and spices; bringers of premiums, news, and gossip from worlds somewhat broader of horizon than our own.

In ratio to the total population, our modern tribes of peddlers have decreased. Yet the American peddler is by no means extinct. Hundreds of thousands still follow the great trade, and tens of thousands still follow it along rural roads.

Floundering through far Colorado dust I met Morris, the needle peddler. Morris was halted beside a water hole, cranking futilely at a decrepit flivver, the sides of which said NEEDLES. The motor said nothing at all. Therefore Morris talked, pausing to wipe greasy hands on the legs of faded blue overalls.

"Abso-lootly! I've sold needles all over the United States, Canada, and Mexico. For twelve years I've traveled the roads sellin' nothin' but needles. They keep the patches down and they keep me up. It's because they're a bargain, my friend, a true bargain in needles."

He spun the crank again with renewed zest. He repeated that he had sold needles all over North Ameriky, that he keeps on the road, heading for cooler places in summer, for warmer places in winter, eating, sleeping, and selling in the open.

"It's the life. Never bound down. Always with a stretch of open road before me. I get along on mighty little, never more than fifty dollars a month, sometimes as little as fifteen. And I can always sell needles." He noticed there was a button missing on my coat front. "I'll sell you the de luxe assorted bachelor's kit. Regular price fifty cents, but two bits takes it."

There is also the roadside American who lives from more inventive trades and services. Far in the Arizona flatlands, thirty-one miles from town or filling station, I ran out of gasoline. The situation was outrageous but true. The starter would not start. The wheels would not turn. I cranked and pushed, pulled the vacuum tank apart, pounded the gas tank, blew into the gas line. There was no gas. Ten miles in front and ten miles behind I could see the road, and not an automobile or burro or farm wagon was in sight. No sign of life except a jack rabbit that waited in the shade of a lone fence post, panting badly. Then finally one car appeared, a quivery vehicle, shiny black except for a sign that was lettered in white: *Here Goes Henry—We Hope!*

The car groaned to a halt, and from it climbed a slender, red-haired youth who smiled charmingly:

"Out of gas! Yeah. If you got a rope I'll pull you in."

I had a rope and he pulled, for a slow, well-measured twenty-eight miles. Then a sun-reddened hand flapped and he signaled me to a halt, which was easy.

"Seems like I'm out of gasoline too." He studied his speedometer. "That last five gallons I bought only took me a hundred and eighteen miles."

We had time to talk. He explained that he was from rural Illinois; that he was out whitewashing. He meant just that. He carried

a specially designed pump gun dedicated to the cause of spraying grease-smeared garage walls with cleansing whiteness. He showed me the gun, and by way of demonstration whitened a front fender of his car.

"It's a good gun, and I know all I need to know about whitewash. I was raised on a dairy farm. We had to whitewash the milk sheds once a month. Then gradually I got the idea that these garage dumps along the highway would look better if they was whitewashed too. I fixed up an outfit and I've been whitewashing all the way up and down the West Coast from Canada to Tia Juana."

"How's business?"

He whittled a match into infinitesimal slivers.

"The selling end is terrible. Lots of these garage people don't see any sense to whitewash. They say that next week their walls will be just as damned dirty and greasy as ever. That's what I used to tell my dad when I was a kid back on the milk farm. But somehow I manage to keep limping along. Sometimes it takes high-pressure selling. The other day I was out of gas and oil, and didn't have the price of a Wimpy hamburger. So I located a one-stop service station with gas tanks and lunch stand and a garage that needed whitewash in the worst way.

"After I'd filled up on gas and oil and victuals, I went up to the boss and talked it over man and man. Well, he looked at my gas tank full up, and he looked at the three empty cans of oil that had gone into my crank case, then he looked at the restaurant check including three bowls of chilli and two pieces of apricot pie, and finally he said, 'All right, damn it, I guess I do need some whitewashing.'"

My benefactor abandoned his whittling.

"But just last night a new idea hit me all at once. Here I've been pounding the road a couple of thousand miles from home, when the best place for the whitewashing business is back among the dairy farms. They have to whitewash every so often. Law makes 'em. So I decided maybe I haven't been thinking of business so much as just wanting to get out and gad. Anyway, I'm going back to Illinois and do whitewashing like I used to when I was a kid. Only now I got the gun, and I'll be a whitewash contractor."

At El Paso, where west seems to merge rather confusedly into south, where leaves remain green and bands play noontime concerts on the public square and the through highway suddenly becomes the Jefferson Memorial Drive, I met another roadside American.

His name is Sam Breck. He carried a small metal box that was hitched to a shoulder strap. The top of the box said SIGNS in blood-red letters. Sam paused at my running board and drank from my water jug. Then he fingered his solitary front tooth as if to steady its hold, took off his hat to show a mop of hair the color of beer foam, and began to talk of times and signs.

First he explained that he is a tramp sign painter, hoofing the dirt from Maine to California. He sighed as if from keen appreciation of the vastness of the United States and added that for almost half a century he has been traveling the roads in company with his paintbox, bottles, and brushes.

Sam has watched the birth of much history. He has given a hand to rocking the cradle of American advertising. He has taken plenty of hard knocks, but he vows that in all his half century of traveling he has never lost his paint brushes, his paint bottles, or his liking for the open road. And he has never run out of chewing tobacco.

"With paints a man has got to have chewing terbacker. Work with a empty mouth, you breathe in fumes and paint lead. You take the bellyache, lay awake at nights, and gradually you die off. Terbacker keeps out the pizen."

He destroyed the remaining corner of a badly worn plug of chewing tobacco. We are in a mighty age of signs. New highways are barely born before they are lined with posters. Yet meanwhile the lot of the transient sign painter becomes all the more humble.

Why? Sam spat with great accuracy at a solitary barb of cactus.

"Speed is the real answer. When I was a boy, signs was a trade that most boys coveted. I strolled around earnin' dimes and quarters for letterin' farmers' names on the front gables of their barns. Then gradually I commenced to paint name signs for farms—Grand View, Valley Breeze, El Rancho, and such as that. Then I went in for store signs for country merchants and from that to patent medicine signs. I worked my way through the Midwest, earned my soup and coffee and stew and occasionally a good beefsteak. I rode rail-

road trains—on the chairs. Thousands of other tramp sign painters done the same.

"By the time I was thirty there commenced to be considerable talk of good roads. So I went in for road signs, little signs with lots of words and thought in 'em. Then we really painted signs—no stencils or paper hangin' or monkey business.

"Then the autos came and it got harder to sell little signs. When a man rode a horse or drove a buggy, he had plenty of time to look and read. When he drove an auto around fifteen miles an hour, he still had a little time, but sign letters had to be bigger, words fewer, and pictures got popular. But nowadays on main highways when a man's drivin' sixty or seventy miles an hour, all he's got time to see is a couple of short big-lettered words and a big bright picture."

Sam sighed again: "Highway signs don't need sign painters no more. They need paper hangers, tall ladders, ten-ton trucks, and floodlights. They've crowded us old-timers off the main roads onto back roads and lanes. Now I'm back where I started—paintin' signs for farmers—'Pigs for Sale,' 'Buy Your Pepper Plants Here,' 'Milk Goats for Sale or Trade.' I tramp the plains and mesas. I do signs for Mexican and Indian farmers that ain't so good on their English. Sometimes I get paid in money, sometimes in chilli and beans and boiled mutton. Somehow I get along. I still find plenty of road to walk. I still cherish the chance to go places."

Sam replaced his hat, retightened his bag strap, and moved on.

Roadside America includes hundreds of thousands, sometimes millions, of harvest followers and fruit pickers, transient workers who keep step with the peak-season demands of our great and perishable crops. Of our harvest armies, the largest echelon goes to oranges. Strawberries rank close second. Wheat, rhyming with heat, though increasingly mechanical of harvest, still requires rush-season workers.

Truck crop, lettuce and spinach, and other "greens"; apples, lemons, pears, prunes, grapes, tomatoes, peaches, melons, cotton, and still other crops offer recurrent and wage-paying havens for roaming harvesters. During recent years picking and packing wages have returned to modesty and caution; yet the pickers and packers follow their established itineraries, traveling usually by automobile,

carrying household equipment in rear seat or rumble; picking for a few days, then driving hard to meet dawn at a new location.

Harvest following has its hazards: bad weather, delayed ripening, ravages by frost, collapsed markets. But there are the compensations of fate. If oranges wane, lemons may hold steady. If strawberries are rained out, maybe the cherries will survive. If in one section all crops fail, there still remain other sections. There are open roads, and the invincible poetry of changing fields. Therefore, roadside America moves on.

Roadside America remains part of us.

There is still sound economic justification for a great and non-militant army of rural workers. Various important crops continue to require temporary forces of pickers and reapers, and seasonal employment of transients is still an agricultural necessity. Though local employment services, and increased supplies of resident labor markedly reduce the demands for harvest labor, yet in various sections of the country great crops still require temporary services of at least 750,000 migrant workers.

There remains, too, the solvent need of itinerant workers for cotton and wheat harvest, to a less extent for the harvesting of corn, sugar beets, flax, barley, and hops. But fruit crops produce the greatest demands for roaming harvesters.

For the past generation the Pacific West has remained first Mecca for fruit followers. For along the Pacific Coast fruit crops mingle and overlap in a most accommodating way, merging harvests of oranges, lemons, grapefruit, apples, pears, prunes, grapes, peaches, melons, and "truck crops." When work is available, wages are far above national averages, with from \$2.50 to \$6 daily a standard picking wage with "specialists," such as craters and exhibit packers, earning double or triple the average. In California, if calendar leaves keep in order, the harvest season begins with olive picking, then rambles on to lettuce and "greens"—spinach, peas, green beans, endive—and other bunch vegetables—celery, turnips, radishes, carrots, asparagus, and so on. Navel oranges are next—in late winter and early spring; then the Valencias and juice oranges throughout much of the remainder of the year. Flivvers wait at the roadside, and deft-fingered citizens juggle ladders and clip half-grown oranges by the "set" (of from four to six trees) and take orders from

explosive superintendents. Then there is the lemon crop to be clipped, sized and packed, peaches to be thinned and later reaped, also early and late pears, and in sheltered valleys wait prune orchards, sagging and deep-purple with fruit. There is a two-month grape harvest—stretching from Mexico to Oregon, and thousands of miles of apple front, where "knockers" still earn good wages and keep picking locales darkly confidential. Working east and south there are the endearing but forever impoverished realms of strawberries.

Most definitely harvest labor has its ups and downs. With its downs goes the invincible hope of better times and better pickings. Thus harvest years shape their incessant and forever varied patterns, while harvest labor lives on by its tradition of dogged, adroit expediency.

Current and recent administration of federal relief again proves the latter.

During its first two years of active operation the Federal Emergency Relief Administration gave charity or temporary care to about 200,000 transient families, roughly, 700,000 Americans. "Transient relief took over the no man's land of responsibility created by the tradition of residence requirements for relief eligibility. . . . The normal mobility of good times becomes 'mobility in trouble' in a period of depression."

In 1938, John N. Webb and Malcolm Brown,¹ of the WPA research department, made a firsthand study of 5,489 migrant families who were receiving federal assistance during that year. From their case studies these researchers concluded that unemployment is by all odds the leading cause of transient distress, and as a reason for leaving settled residence unemployment far outweighed the combined effects of business and farm failures, inadequate earnings or inadequate residence "relief." Ill-health was second as a displacing force, but complaint that impoverished wanderers were on the road to "see the country at public expense," according to this survey, has no basis in fact.

The survey tells that, as a rule, families migrate with the reasonably well-defined plan or hope for finding employment or an improved status of living, that at least four-fifths of all migrant

families are in quest of economic betterment, and that farming failure due to drought or flood vied with unemployment as an explosive force.

"The families were neither particularly adventurous nor, on the other hand, irresponsible in undertaking the migration which later necessitated aid from transient bureaus. . . . The essence of the migration studied is contained in the fact that the families were, in general, distressed groups which saw a reasonable solution to their problems through migration to another community."

According to the survey, migrant families do not travel far. The Webb-Brown researches show, for example, that of 29,885 transient families applying for temporary "relief" 38 per cent were embarked on a jaunt of less than 400 miles, 40 per cent were traveling distances of 400 to 1,500 miles, 19 per cent from 1,500 to 2,100 miles, only 3 per cent more than 2,100 miles.

The same research tells that most migrant families represent complete family groups; that no more than 7 or 8 per cent of the total leave home as either mendicants or adventurers; that the majority are native-born whites; that more than 98 per cent are bona fide citizens of the United States; that about 85 per cent are led by married couples; that about 49 per cent of this migrant personnel is male and about 51 per cent female. About three-fifths of the total have completed grade school, 30 per cent are high-school graduates and 5 per cent have college degrees.

Among farm owners and tenants now on the roads, more than half have been drought refugees. A few were leaving lands destroyed or damaged by floods, and the rest, about 10 per cent, were evicted tenants.

The survey showed that 92 per cent of all families interviewed traveled with specific destination, and that of the remaining 8 per cent half were "just out lookin' for work."

The evidence is overwhelming that Americans do not use migration merely as a ruse for seeking charity from federal or state governments. Again quoting John N. Webb and Malcolm Brown:

"States become acutely aware of the inflow of outsiders because of the public assistance problem that results, while there is little but the occasional request for verification of legal residence to remind the individual States that the overflow of their own citizens

creates a similar problem elsewhere. Moreover, the principle of legal residence which has for so many years governed the attitude of the States and their subdivisions toward relief is based upon the belief that every person 'belongs' to some community, and should expect assistance only in that specific place. And, finally, there is the obvious fact that some few States receive more migrants than they give. Such States are prone to insist that by giving relief to non-residents they only increase the inflow. Yet no one has demonstrated that the hardships and uncertainties of migration are undertaken for the sake of transient relief. . . . Border blockades and the refusal to give any form of assistance have been singularly ineffective in stopping the inflow."

Further to refute the credo that roadside Americans represent but a dreary caravan of ne'er-do-wells, the Webb-Brown survey offers this straightforward conclusion: "It is worthy of note, however, that the figures on the turnover among transient families suggests that migration must have been wholly or partially successful in a large proportion of cases and within a relatively short period of time."

The cold weight of government statistics doggedly discounts the dramatic interpretation of incessant transcontinental migration à la John Steinbeck and *Grapes of Wrath*. Rather it presents the picture as a reasonably well-balanced interchange of peoples among the states: "Two-thirds of all the movement resulted in the balance of losses and gains within each of the States, and in terms of population displacement, was canceled."

But in general the trek of rural migration is westward. The flow of families into Kansas, Colorado, California, Washington, Oregon, and New Mexico is still notable, except in the South, where migration is largely northward toward Illinois, Ohio, New York, and Michigan, and where Negroes comprise a substantial percentage of all migration. Migration during the past ten years closely paralleled that of the 1920's. In proportion to resident family population, problems of needy migrants have been most serious in Idaho, with New Mexico and Colorado ranking second and third respectively, California fourth (and not first as generally supposed), followed closely by Washington, Wyoming, and the District of Columbia. According to census record, too, highway migration is most characteristic of

America west of the Mississippi, and through the long linking of depression years a majority of migrant families are from towns and cities, rather than from farms.

Researches of Webb and Brown offer the following summary of personal characteristics of today's migrant family:

"Youth is a clearly defined characteristic of family heads. One-half are under 35 years of age, and four-fifths are under 45 years of age. This distribution suggests the presence of many infants and school-age children in migrant families (among families studied four-fifths of the children were under 15, and one-third were under five years of age). Further migrant families are small families with an average of 3.1 persons."

As already noted, poor folks on the go are preponderantly native-born white. By comparison foreign-born and Negro migrant families are underrepresented: "These two minority groups were overrepresented, however, in the resident relief population, showing that although more frequently victims of the depression, these groups nevertheless tended to remain immobile . . . local prejudice outside the big highly industrialized areas makes the migration of distressed foreign-born persons more difficult than the native-born. Custom and prejudice operate to restrict the mobility of Negro families. . . ."

Migrant families on relief show a higher level of schooling completed than do the heads of either the urban or rural resident relief population. It is clear, therefore, that migration was not caused by lack of education. Further, a majority of the heads of migrant families are able and willing to work, and they are within the preferred age range for private employment. There were fewer unskilled and more skilled workmen among migrant family heads than among either the resident relief population or the "gainful" workers as disclosed by the 1940 census. The greatest number of skilled and semiskilled migrant family heads were building and construction workers. Among the unskilled, manufacturing, agriculture, and domestic service were represented in about equal proportion. The principal white-collar groups were farm owners, salesmen, storekeepers, musicians, technical engineers, and clergymen.

The Webb-Brown survey lists the following causes for family migration:

*Migrant
Families*

Total 4,247

REASON FOR LEAVING SETTLED RESIDENCE

*Per Cent
Distribution*

Total 100

Economic distress 69

 Unemployment 49

 Inadequate earnings 7

 Unable to work in particular community 3

 Farming failure 8

 Business failure 3

 Inadequate relief 3

 Unwilling to be on relief 1

 Evicted from home 2

 Relatives unable to continue support 1

 Miscellaneous economic difficulties 1

Personal distress 25

 Ill-health 11

 Domestic trouble 6

 Disliked separation from relatives or friends 4

 Community disapproval 1

 Personal dislike of community 2

 Miscellaneous personal difficulties 1

Not in distress 6

 Job required traveling 3

 Left job 2

 Left farm ?

 Left business 1

 Other ?

? Less than 0.5 per cent.

American history is an odyssey of human mobility. The gold rush of 1849, pistol-point occupation of Oklahoma Territory, the blazing of the Oregon Trail, the vast traffic of the Natchez Trace merely typify a trend of two centuries. Furthermore, from a census standpoint, it seems irrefutable that American migration continues to increase. Arithmetically, there are more poor folks on the go today than ever before. To speak broadly, this migration seems to be a highly desirable social precedence.

The willingness to pull stakes and to brave the hazards of an unfamiliar environment remains an essential American characteristic. Our people continue to seek the grail of more plenteous life. Tillers of poor lands still push forward to richer lands. With the coming of depression, jobless sons and daughters of the towns and cities continue to push outward to poor farms and poor land. Misguided migration has stayed. Thousands of farming communities, chosen as sites of extreme promise, have failed. But American migration continues to rest heavily on the cushioning law of averages.

The masterly compendium *Migration and Economic Opportunity* published by the University of Pennsylvania Press, offers an appropriate summary:

"It is clear that the so-called unguided migration has been and remains a most important method of improving the distribution of population in relation to economic opportunity. Unquestionably, however, it is an imperfect instrument, and its failures result at least as often from the lack of movement as from its mis-direction. There is nothing in the analysis to suggest a need for supplanting spontaneous movement by any general or rigid system of control, and there is much to remind the planners that the present mobility of the American people is one of the greatest assets on which they may count. But the imperfections are quite serious enough, and their human consequences sufficiently tragic, to justify an interest in the possibility of more intelligent guidance . . ."³

Fundamental causes for large-scale migrations remain present and potent. In rural America today are probably at least a million farm families occupying land that is eminently unfit for cultivation. Another million rural families are now listable as part-time farmers. These in general are demonstrators of the highly apparent fact that part-time farming, as usually practiced, makes a significant contribution to the protection of many families, but falls far short of giving them complete security against unemployment.

Adam Smith has pointed out most aptly that man is a difficult baggage to be transported. To this sage and honest discouragement of encouraged migration we may also print, for sake of the record, that "no possible placement of people could make them safe in an insecure economy and no migration policy can itself guarantee the indispensable increases in economic opportunity."⁴

Yet in a world of fast-changing opportunities and profound international strifes there must always be many for whom the ability to move offers greater security than even the most-favored location. This platitude involves a giant share of the actual agrarian history of the United States. For a century disposal of public lands was a ranking issue in Congress and throughout the nineteenth century the one dominant political and economic intention of the American government was that of hastening occupation of the public domain. The urge for colonization and the active encouragement of migration by deliberate acts, or incidental gestures, of government remain thus directed. During the past thirty years irrigation and reclamation work of the federal government has of itself resulted in migration and resettlement of more than 150,000 rural citizens. Current works "program" may eventually triple or quadruple that number.

Organization of the Federal Soil Erosion Service in 1933 and passage of the Soil Conservation Acts of 1936 and 1938 marked a governmental will to "propagate the use of soil conservation practices in agriculture through the medium of demonstration" in which the government provides advice, materials, and equipment to co-operate more or less directly with the once-independent farmers.

Soil conservation, to be sure, is not forwarded as a direct means for encouraging or controlling migration. Neither are such epochal experiments as the Tennessee Valley Authority, Grand Coulee Dam, the extension of public forest domains, and the planting of shelter belts of timber across the western plains. But the combined effect of all constructive public works is to increase population-carrying capacities of various areas and therefore actively to encourage migration.

A similar force may ultimately be exerted by national employment services, which though thus far bogged in problems of local labor surpluses can at least envisage a day when it will be desirable if not imperative that the federal services promote an extensive exchange of laborers and farm workers between and among the various sections of the country.

At this time a heaping majority of the forces directly or indirectly affecting migration are either unintentional or accidental. However, such highly extemporized experiments as those of the Resettlement Administration have deliberately sought to move populations by creating new government communities. Public purchase of more

than 10,000,000 acres of land for use as forest or game reserves has likewise displaced about 23,000 established rural families of whom about 12,000 are requiring public aid for relocation.

Also, according to the National Resources Board, there are in the United States at least 100,000,000 acres of land, not at present in farms, which when drained, irrigated, or cleared would be more productive for crops than the land from which it is now proposed to encourage retirement. Within our lifetimes there may be sound economic justification for opening to plow at least half of this still untilled reserve. If so, rural migration will be still further increased. The same result is to be expected for a continuance of the decentralization of industries. But here again prophecy is a perilous pastime. We still know far too little of the vital details of American migrations and the much-entangled forces, goals, and bonanzas which keep poor folks on the go.

Retarding forces seem rather more impressive than the attracting forces. As the authors of *Migration and Economic Opportunity* point out:

"The farmers of Iowa are not anxious to share their cornfields with drought refugees from the Dust Bowl, and the inhabitants of the Kentucky Bluegrass would hardly welcome a large migration of poverty-stricken mountaineers from the Coal Plateaus seventy-five miles to the east . . . Whatever the advantages to the migrants we should expect the average level of living in the receiving agricultural area to be lower rather than higher as a result of the change."

But the will to travel, to seek new strands and found new homes, lives on as a basic American temper. The same will continues as one of the greatest American defenses against poverty or against threatened or incipient agrarian ruin. Roads still lead up to inviting hills and down again into deep green valleys.

Part Two

THE POOR WE HAVE WITH US

LO, THE POOR INDIAN!

WHO are the poorest among our forty million rural poor? Offhand the Southerner or Easterner might say the Negro sharecropper of the poor-land South. The Westerner might suggest the dry-land squatter; the New Englander might say those poor devils called outpost fishermen. The Northwesterner might say the cutover riffraff—foiled by vanished timber and non-existent soil.

All are good guesses. But today the poorest of all rural Americans, considered as a large group, are the American Indians. And probably the greatest of American conservationists are likewise the American Indians. Furthermore, through the generations and centuries the tribal commune of the American Indian has lived, or valiantly sought to live, as the most durable and distinguished American attainment in rural community life.

“Conservation” has long been one of the most-abused words in the American language; a sop for publicity lovers, a polite synonym for political carnage, for multitudinous briberies with public money, a standing alibi for headstrong plunges along untried, unproved, and little considered paths in government. Likewise, “conservative” has been used as a common handle for derision. Yet doggedly and during the past decade the truth has become more and more invincible that the bona fide conservative, in the true sense of the word, is the one who seeks to save or restore for the good of present and future America. Far to the front among all our great conservative populations is the American Indian. And he is a conservative in the face of overwhelming disadvantages.

There are now about a third of a million Indians in the United States. Since 1915 a majority of our 230 Indian tribes, or bands,

have been growing. The Indian is anything but a dying race. He is actually increasing more rapidly than most of his white neighbors. Indian birth rate is now about 24.3 per thousand. Indian death rate, which was 35.6 in 1911, is now only 15.1.

More than 60 per cent of Indians of the United States are full-bloods; almost 90 per cent are westerners. Back in 1806, Captain Meriwether Lewis, commanding the Lewis and Clark Expedition, estimated Indian population of the Far West and Northwest as 50,000. The tribes he listed now number more than four times that many.

But during the past fifty years Indian lands have diminished at the rate of almost 2,000,000 acres a year, for an extremely gross loss of 90,000,000 acres. In one way and another, more than \$500,000,000 of tribal funds held in trust by the United States government have been dissipated. These are two compelling reasons why Indians now occupy the lowest bracket of American income.

The Navajo is the great "proving ground" of Indian administration. With a current census of about 59,000, the Navajo nation is by odds the largest tribe in the United States. Back in 1868 when Navajos were taken from captivity at Bosque Redondo, the tribe count was 7,304—with a possible one or two thousand hiding out in the gulches. On land no white man would have, on which most white men would starve, the Navajo has actually multiplied better than sevenfold within a lifetime and he has subsisted from land.

The Navajo reservation is likewise the biggest. From Arizona and New Mexico it takes about 25,000 square miles; half the area of England and Wales; enough land to cover the states of Massachusetts, Rhode Island, Delaware, and half of Vermont.

These states have a population of about 301 to the square mile. England has about 611 to the square mile. The Navajo reservation has a little more than two to the square mile. But from productive standpoint the desert land of Navajo is the most overcrowded. At least four-fifths of the Navajos must earn livelihoods from open-range herding or dry-land farming. Even so, the Navajo is one of the most self-contained of Indian nations and is perhaps farthest of all great tribes from the point of docile amalgamation with whites.

Among the juniper woods and wind gulches, the arroyos, water

pockets, and mustard-brown ranges which make up the 17,000,000 acres of Navajo reservation, a new America and a new American government are being born. I know because I have watched the birth labor. Sam Gray, whose new Navajo name is Sayeselah, knows still better because he is one of the sixty-eight "headmen" or community leaders who serve as midwives to the new nation.

The constitutional assembly for Navajos had a turbulent wake. Only two of its original members spoke English. Some who came from the far corners of the great reservation had never seen a train or a white man's town. Most of them still wear their hair long, band their foreheads with black or blue ribbons, ornament store-bought dungarees with belts and braids of home-hammered silver. Some of them continue to wear turquoise earrings.

The first assembly met early in 1937, at a government house in Window Rock, Arizona, the new Navajo capital. I attended as a reporter. There was bedlam in the somber hall. Coppery fists waved and scores of tongues babbled in Navajo chorus. There was no laughter and I could hear no happy words.

As a rule the Navajo is a good-natured American who laughs a great deal and smiles even more. That is the mood of Dineh (Navajo is merely a Spanish name which our greatest of Indian nations has never approved). Dineh's normal inclinations are to say luh (all right) and O (yes) a great deal more frequently than he says dohtah (no). But here I often heard many dotah and still more often holah (I don't know). Then Sam Gray got up to speak. His was sheer poetry of the Navajo monosyllable:

"Sixty-eight years ago we Navajos came back to the reservation. Then we were just a small band with only a small band of sheep and stock. Now we grow to 50,000 people and our stock must grow with us.

"Then we had plenty of grass for our herds. A man could almost see the grass sprouting right after the rains. After it rained you could walk on the new grass and it would sound like you were walking in the snow—cracking under your feet.

"But now the ground is like rock. The only thing a person hears cracking are his knee joints. Now after rains you hear the roar of water down these gullies. Every time we herd our sheep we have a small dust storm following our flock . . . Our mother

Earth is slowly dying. What of coming Navajos who must take our place?"

Tagachiennie, headman from Avada and far gulches, cupped dark sweating hands to his parched lips. "Sayeselah!" That is the answer. There's no word for "constitution" in Navajo. Sayeselah is the new coinage which means "foundation word."

The assembly got down to business and elected provisional officers by oral vote, then elected a committee of five to draft the first constitution. But the will of the assembly was to vote by secret ballot—in an unwritten language! Nominations were made by word of mouth. Slips of colored paper were handed to all members. Candidates were designated by a given color—green, yellow, blue, and so on. Ballots were cast by colors. It was probably the first legitimate Navajo election since the great nation became "wards of the United States" back in 1849.

At the little Window Rock schoolhouse the Navajo constitution writers continue to fight with the strange twists of white man's phrases—for the good of Dineh generations "still waiting to be born." Each draftsman speaks his suggestion. A mission priest stands at the blackboard and writes down the suggestion in a newly invented phonetic code of the Navajo language, a peculiar writing which uses English characters mixed with a sprinkling of Yiddish, Polish, and Scandinavian. Then the interpreter reads what is written in spoken Navajo and committeemen memorize what he says.

One old Navajo rose and gestured magnificently toward an open window. "My head is tired. I can't think any more." After proper conclave all members got to their feet. "We will leave now to rest our brains, plant our crops and tend our sheep. In a month's time we will be back."

So the meeting was adjourned. Committeemen mounted horses. Blotches of dust showed in the sinking sun. They were back within a month.

The work is not yet finished. But the gist of the constitution is now clearly apparent. Navajos seek the yet unrealized right of self-government. They will elect a tribal assembly for a common term of six years, by popular vote. President and vice-president can be re-elected only once. The president may enter into debate and vote as a member of the assembly.

No tribal officer can hold any state or federal job. The Navajo

judiciary also will be elected for terms of six years and office tenure will excuse no man from prosecution for misdeeds. The long-proved communism of the Navajo nation must live. The reservation must remain tribal property forever and the nation shall have the right to establish and own tribal co-operatives for buying, selling, or producing any needed merchandise, operating mills, stores, mines, factories, and power resources within reservation limits, and for supporting orphans and minors within the tribe.

To the Navajo mind there is little doubt that the constitution now at birth will be accepted by tribal vote. But white man's law says that the constitution must first be approved by the Secretary of the Interior. That done, it will be submitted to the tribe for popular vote. Finally Navajo heads will seek to have their constitution confirmed by act of Congress. They know that secretaries of the interior come and go. They believe Navajos will go on forever.

The tribal constitution also becomes a Navajo Declaration of Independence; an unwritten vote of confidence in the belief that Indians can govern Indians better than white men have done, or are doing; that confirmed possession and development of land means Indian life tomorrow; that Indians in general, as the fastest increasing division of American population, can and must mold Indian salvation on home grounds.

So Sam Gray, who is one of the most lucid among leaders of Navajos, rode home to change good theory into equally good fact—within his own home. Sam's son Joey, now off the WPA and broke, is likewise home to help and be helped.

I called at their hogan—an octagonal hut built of logs and mud, and facing the east as all good hogans should. It nestles at the base of a breast-shaped hill, far out in the New Mexico wilds of the reservation. Sam left his wife and four young children and his son's wife and five young children to lounge in the sunlight beside the lamb pen, called to me and his son Joey, and led us toward his hilltop corral, which is fenced by gnarled logs of native juniper.

Sam explained in singsong Navajo that water was gone from his valley, and since the only good spring within a dozen miles was atop the steep hill, he had moved his sheep and horses to the water.

So he led up the steep hillside, walking deftly and with the spry-

ness of eternal youth. His silver and turquoise bracelets sparkled in the sun, his bright black hair seemed clamped to his head, and not even his outfit of white man's overalls could hide his Mongol gracefulness.

I wheezed and panted. So did Joey. When we paused to rest he began to tell me of his adventures as a member of the New Deal. As a federal man Joey's job was to keep the drifting sand shoveled away from the portals of the Navajo administration building at Window Rock.

Each day the sand blew. Each day Joey shoveled. Each day newly drifted sand piles offered another day's work. There was no mental uncertainty about the job and Joey had time for a great deal of thinking. Years ago he knew Window Rock as a mere fragment of desert. Now it has become a new fruition of Washington magic.

Taxpayers' millions have gone into its building. For white people who hold Washington jobs are acres upon acres of new office suites and homes, club quarters, school quarters, eating quarters, smoking quarters, telephone rooms, flagstaffs, running water and squirting water, cold or hot just to surprise you; buzz boards and magic bells; big shiny automobiles and trucks to haul out hordes of government clerks.

There are also quarters for Indian who get money paper from Washington. But Joey muses that while white men live in fine rock houses with much varnish and brightness on the inside, real Indians must live in a tiny cluster of patched and mildewed tents. All these beauteous buildings, shiny cars and throngs of white men who wander over the reservation, peering into hogans, measuring skulls and mouths of Navajos and requesting them to say "Ah," looking through periscopes, microscopes, and horoscopes and so bringing the Dawn of Science to Indian land—all these things are said to be for the Dinehs' good.

But Joey notes that despite this tremendous goodness from Washington, poor Navajos have become poorer and thousands who were once secure of flocks are now destitute. Hundreds who found government jobs with paper money have had to leave their hogans and go to faraway places.

Joey pondered a great deal on such matters while waiting for the sand to blow back again. He pondered on the magic of the bluish checks which twice each month gave him more money than he

had ever before earned in a year—even while many Navajos went hungry and more lived on coffee and a bit of flour. Joey thought right along. But before he could reach a practical solution it was time to shovel sand again. And when night came he rode a truck to Gallup, New Mexico, there to play among white men's saloons and to see.

Then one day a white clerk asked him to make some more X's on a sheaf of paper and told him that his job was finished. Joey pointed out that sand still blew. Amicably the government man shook his hand. So Joey went home and changed his formal name from Hosteen Nez (Mr. Tall Man) to Hosteen Tso (Mr. Fat Man), once more a poor and rural Navajo.

Sam Gray waited for us at the corral gate, viewing the handful of mongrel horses that loitered about the water hole. He faced the setting sun as an old man should. A dim shadow fell on the dusty earth behind him. He was in a mood of reverie and review; so we all lounged against the juniper fence while Sam spoke of his people.

There's no word for "progress" in Navajo. Yet the Navajo has made great progress. Two generations from an "untoward barbarian," his crime rate is far below white man's averages; so are his relief demands—less than 1 per cent of current population. Such white man's modernities as coeducation and woman suffrage are ancient history to the Navajo. For centuries they have been part of his life. His women own most of the property, inherit and bequeath, donate names and kinship of clans.

As an adopter the Navajo stands without equal. He has adopted his jewelry trades from Mexican Indians, weaving from neighboring Pueblos, livestock raising from pioneering Spaniards and white Americans. He has taken to white man's farming ways and crops—sorghums, canes, and trench silos for the dry farms of the Nava Valley; fields, gardens, and orchards among the newly irrigated fringes of the San Juan basin, where almost overnight Navajos were changed from herdsmen to intensive farmers by order of Washington.

Last year Navajo families used 2,700 acres of irrigated land in the Shiprock, New Mexico, area to grow crops with a market value of \$110,000—about 3,000 tons of alfalfa, 700 tons of melons, and 400

tons of pumpkins, in addition to plentiful harvests of beans, corn, potatoes, and garden truck. Therefore, Fred Cudie, Etessehe Begay, Ma Shosi, Denelthe Soie, and all their farming neighbors are proud. Most of them gave up their range flocks so that they might use the plots with "magic water." They have managed to live from the land, to store dried fruits, hay, melons, and vegetables for future use, to sell a great surplus during a year when many white men failed at farming.

Though nomads and shepherds by inheritance, Navajos are making an immediate success of plow-and-hoe crops, such as potatoes. In the Nava Valley, where Navajo farmers work about 1,200 acres of dry-land farms, sorghum is becoming a leading crop. Cornstalks formerly wasted are now being saved as winter feed for livestock. Silos are making their way into the reservation.

But there is not enough water for all Navajo fields—or even a twentieth part of them. The reservation is still the biggest of all. From Arizona and New Mexico it takes an area more than half that of all New England. While its population has increased seven-fold within a man's lifetime, the area has grown only by fragments of desert bought principally with tribal funds. Only about one-tenth of 1 per cent of the reservation is under irrigation. If this were divided equally it would give each Navajo family a watered garden plot about the size of a small hotel room.

Sam Gray knows there can never be an equal division since rivers are few and surface water holes are from ten to a hundred miles apart. White men have called it the most worthless land that ever lay in God's out of doors. Sam Gray does not believe this. He does believe that water is life. And he knows that Navajos must remain with their country, for they have no other.

Like many Navajos Sam is a historian of a rudimentary sort. He recalls that the close of the Mexican War saw the Navajo brought into the United States. In those days our ideals of Indian relations were to slaughter as many Indians as possible, on the principle that dead Indians are good Indians. Thus the United States opened war on the Navajos, sent soldiers to slaughter livestock and herders, burn hogans, bribe enemy Indians to help kill Navajos and to rape and enslave their women.

In 1862 General James R. Carleton, commanding the "Depart-

ment of New Mexico" and duly aided by a slightly respectable desperado named Kit Carson and a following of Utes and Mexican bandits, rounded up all surviving Navajos and marched them three hundred miles to imprisonment at Bosque Redondo, which later became Fort Sumner, Kansas.

Sam Gray was a baby at that time. He was carried most of the way, strapped to his mother's shoulder. He does not remember the bitter march. He does remember bitter years within barbed-wire stockades, the sore eyes, hunger, sickness, and bitter cold that belonged with prison life. He also recalls the long return march to reservation in 1862, fierce suns and fiercer prairie storms.

But Navajos had received from the United States a "permanent" reservation of about 7,000 square miles of desert. In turn the Navajo promised to live according to the white man's laws and was promised protection of his land; rations of food for ten years; supplies of farm implements, and seed, some sheep and goats, and a free school for every 35 children.

For the most part the Navajo kept his promises. For the most part the United States did not keep our promises. The schools were not built according to treaty. Promised supplies of seed failed to arrive in time for Navajo planting. The government issued a few sheep and goats, about two head to the family, and temporary rations. But the rations were immediately cut to half, with long intervals of fast.

So the Navajo was left to war against destitution and starvation, asking no gift except protection of his land. Within ten years Indian agents estimated that 85 per cent of Navajo subsistence came from herds and dry-land farming, 9 per cent from hunting, and 6 per cent from the government. Sam Gray recalls that the 1890's brought hordes of white desperados into the country. White outlaws killed Navajos and stole their lands and stock. Then railroads joined the opportune pillage. The national Homestead Act opened all lands bordering the reservation to white settlement, then granted alternate sections as bounties to frontier railroad builders.

Indian rights were little more than squatter rights and white squatters were stronger. By presidential order Navajo families living away from the reservation may receive a 25-year renewable and tax-free lease on one section of public land. But the patent includes only the right of use. The Navajo can neither sell land nor rent it.

Sam Gray has little interest in white man's statistics. If he had he no doubt could tell you that the American Indian is anything but a dying race. As his population continued growing, the Navajo, like many other great tribes, has repeatedly sought to buy more land with tribal money. Too often tribal funds have been hopelessly roped with the red tape of the federal government.

Sam Gray continued by pointing out that the Navajo is denied both franchise and political voice. Until 1929 he was neither a citizen nor an alien—merely a “ward of government.” Now the Navajo is technically a citizen. But he cannot vote in either state or national elections because he is not a taxpayer.

John Collier, the New Deal Indian commissioner, came to the post from a job as administrative assistant to the American Indian Defense Association where he had spent several spirited years fighting for “Indian rights.” Today Collier’s name is mud, or worse, among most Navajos. Administration of the New Deal’s Indian Reorganization Act has proved an amazing foray of clashing doctrines and Capitol Hill dogfights. Already the act has become a target for an incessant barrage of bills to amend or annul. True, the New Deal has visited the Indian with an all-time high of government spending—“work projects” which include 74 reservations in 23 states, placing the Navajo first on the list. But only about 3 per cent of the money has gone for irrigation, still less for needed lands.

And Sam Gray, like most headmen, continues to exhort land instead of dole; recovery of at least some of the land which white men have lately pried from Indians. To date the Great White Father and the innumerable lesser white stepfathers are exceedingly slow to make the refund. To date recoveries of Navajo lands are almost too small to be visible even on a big map. In years Sam Gray has become an old man. But he still smokes an Indian’s pipe and speaks the tongue of his people. Though he knows many white men, he still knows the life of the Navajo and his desert. Therefore, he noticed that what white men call their New Deal is seeking to bring what white men term the Dawn of Science.

For example, white know-muches from Washington estimate the capacity of the Navajo range as 560,000 sheep units—grass and water for 560,000 sheep by white man’s count. All at a grand swash, New Dealers have undertaken to reduce Navajo flocks by 68 per cent!

When the great cut is finished, each Navajo family will have an average of 41 head of sheep. How many sheep, asks Sam, are needed to provide a family's living? Know-muches from Washington say 53 ewes are enough. But Indian traders who have spent a lifetime on the reservation, who gamble their money and years on Navajo solvency, place the number at between 200 and 300. Sam Gray makes no claim to mastery of white man's figures, but he knows that somebody's arithmetic has gone sour.

As a lifelong sheep raiser Sam sees the merit of holding flocks to the feeding power of desert range. But he also knows that when small flocks become tiny flocks poor Navajos suffer and rich Navajos become richer. Sam has heard wise Indians and knowing whites say that seven Navajo families now own or control more than half of all livestock on the great reservation. Now that thousands of small flocks fade into nothing, big flocks have all the more grass and water on which to thrive.

In use of sparse grass and scarce water, Navajos are still generations ahead of the wisest whites. But Sam Gray notes that Washington persists in giving the Navajo much wise advice without allowing the Navajo to repay in kind. With the advice come continued cargoes of clerical errors. Recently from out of the Potomac fog Navajos received a shipment of twelve fencing jackets. In the wake of the fencing jackets came a huge case of bolo knives. Navajos are using these as meat cleavers. How to make use of the fencing jackets is still a mystery.

Sam has given the matter considerable thought while rounding in the sheep and resting at the corral gate. Judged bluntly, it sometimes seems to him that as the Navajo comes of age the white man reverts either to abject infancy or to complete lunacy.

But Sam Gray is past the age of blunt judgment. With sincerity and gentleness he offers the conviction that Navajos and perhaps all Indian nations can now do better for themselves than white men can do for them. That is the genius of reasoning which brings about the new constitutional convention of Navajos—who would found within their homes and their fathers' homes a new nation which would help Navajos to endure and stand independent even as Washington administrations fall and rise and fall again. In the mind of Sam Gray, and perhaps of most other thinking Navajos, this is a just and dutiful resolve, an omen of Navajo maturity.

Sam watched the sunset for a time, then pulled open the gate, shooed away the horses, and made certain that a wobbly-legged colt had opportunity to drink from the tub-sized spring. Then he stopped at the brink of the pool and painstakingly measured the water.

He splashed water on his lips and forehead, walked quickly toward us through the settling dusk. Then he spoke to Joey and suddenly his voice seemed to grow vibrant and young.

"Tomorrow we start to work!"

Joey's yawn gave way to a posture of intense concern. "You mean—shovel?"

Even in the dusk I could see Sam's lips become hard and close-set. "Not shovel. We dig. We lay tube in earth to carry water for lamb pen. We raise more sheep."

Perhaps you are acquainted with the road to Taos, New Mexico. It is one of the oldest farm roads in North America. Indians have traveled the way for centuries, perhaps thousands of years. Here in the pueblos of the Rio del Norte live the longest settled of contemporary farmers, a people of peace and of good earth.

I like to think of the Taos pueblo as the cradle of American agriculture. For here good people have tilled fields and raised crops since before the dawn of written history. It was an old farming land while "cultured" Europe was a howling wilderness. Now that Europe is again a howling wilderness this highland of Indians is still a great farming stronghold. Along the upper Rio Grande are seventeen Indian pueblos, mud-built apartments which have stood through the centuries.

The Taos pueblo is farthest to the north. I strolled among its rows of small fields, which are well tended and carefully irrigated. Taos men were working the fields, bareheaded and with white sheetlike capes worn over their work clothes. The road leads on to the tribe's home—the two oldest apartment houses in America—story upon story of brown-yellow adobe mud. Between the two pueblo buildings runs a clear little river, the Rio de Taos. Fat ducks swim its clear waters, and Indian wives do their washing along its banks. About the village ancient farm lands nestle at the base of a tall mountain.

My host was Leo Romez, a prominent citizen of the pueblo, a

member of the tribal council and a good farmer. Leo and his family live in a single room on the lower floor of the taller (five-story) pueblo. He led me through the doorway, lighted a kerosene lamp, slipped his white tunic back upon his shoulders. He was a handsome figure in the lamplight, tall, well muscled, and good to look upon. Walls were high and light. The adobe floor was partly covered with linoleum. The home was orderly and clean. Chairs and tables were homemade of native woods. But the beds and mattresses and covers were store-bought.

Rosa came into the room—Leo's wife. She wore a checked gingham apron that covered snow-white leggings and moccasins made of deerskin. About her shoulders was a magnificent gray and crimson shawl, which she had bought from the Navajos. The Taos do little weaving or pottery or jewelry making. They are too busy farming.

Rosa explained that she had been working with the corn, husking and braiding the ears into rows for drying. She had quit at sundown to cook supper in her outdoor mud oven. She carried in the provender and laid a table with earthen plates, steel knives and forks. She had made broth of boiled wheat and beef, hot bread, dry hominy, thin crisp corn cakes spread with peppery meat sauce, a ball of white, soft cheese, and a bowl of sweet dried plums. Leo called for his two young sons who had been playing basketball over in the schoolyard. The youngest child—Romez, a daughter—had been hiding under the bed.

As we ate, Leo told me how every Taos family grows and prepares its own food and feed: vegetables, fruits, berries, and grains. Almost every family of the tribe (about 800 people) has use of a milk cow. The tribe owns collectively about 250 head of milk cattle. Womenfolks do the milking. Children drink milk, and most of the rest is made into cheese. Chilli and beans are principal garden crops. For centuries Taos fruits and vegetables have been saved by drying. Visit the pueblo in autumn and you will see Taos rooftops pink with drying plums or fiery red with strings of peppers. Nowadays Taos women supplement drying with home canning.

The Taos plan and grow crops with a first idea of family sufficiency. When this has been provided, the individual farmer is at liberty to sell any surplus. Within the pueblo nearly all trading is

in barter and little money is needed. No Taos keeps an automobile.

Supper finished, Rosa cleared the table and the children strolled out for another turn of play. Leo and I walked outside. He pointed reverently toward Taos Peak. "That mountain, it helps feed us forever. Snow stays till August. It melts and fills our dams and the water runs to our fields. It makes the crops grow fine and tall."

Among Taos fields I studied this enduring cradle of farms. The Taos reservation, about six miles square, is owned communally by all the tribe. It is wholly self-supporting without direct subsidy from the federal government.

Its water reservoirs lie at the base of the high mountain and are fed by springs and by a system of seepage ditches. Well-tended ditches, equipped with wooden lock gates, take the water to the cultivated fields, and to about two thousand acres of grain and alfalfa. This is probably the oldest irrigation system of America.

In the lowlands near the pueblo are the "garden farms"—fenced patches of from two to six acres. These plots are allotted to each family by the tribal council. The soil is rich, and water is treated rightly as precious stuff. As a rule each garden has a small plot of corn or wheat for family use, also a vegetable plot. Cane sorghum is grown for both molasses and stock feed. Alfalfa is the favorite hay crop; melons, sweet potatoes, and small vegetables are among other garden favorites. Some of the garden farms have family-sized orchards of peaches, apricots, or plums. Groves of wild plums and berries supplement orchard harvests.

Tribal gardens cover some 600 acres divided among approximately 100 families. Though the gardens are owned communally by the tribe, each occupant knows that the plot is his so long as he uses it well, and that his children who remain loyal to the tribe will also have land.

The great pasture of Taos includes 15,000 acres and is range for about 600 horses and mules and 600 cattle. The milk herd is pastured on the best grass. The open range yields the Taos tribe most of its money profits.

Men of the tribe supervise the range, and fence viewers make regular rounds. Range duty rotates among the men, with the war chief as director. Conservation of grass and forest is no new experiment for the Taos people. It is a work of generations and centuries. Home grass continues to nurture Taos herds, and home-raised



J. Norman Parkhurst

NAVAJO INDIAN FAMILY

U. S. Soil Conservation Service

NAVAJO INDIAN FARMERS OPEN IRRIGATION DITCHES



timber provides the people fuel, fence materials, lumber for corrals and sheds, for household furnishings and tools.

The people of Taos are not pensioners of this or any other government. Dependable records prove their self-sufficiency for at least four centuries. They are victims of extensive pillagings both by the United States and by the territory and state of New Mexico. But the Taos carry on a life that is orderly and beautiful.

Being neither rich nor embarrassingly poor, the Taos people spend no exorbitant amount of time thinking about money. The tribal council keeps a reserve of cash but individual families live well on extremely little money. For centuries they have bartered grains and other foods for pelts and furs, woven goods, pottery, and jewelry of other tribes. As nearly as I can estimate, the Taos people produce at least 90 per cent of their own food, 100 per cent of their fuel, perhaps half their clothing—in leather and buckskin—and nearly 100 per cent of their recreation and social life.

Farming is their life, finally and wholly. It is also their religion. Since the coming of Spain's missionaries back in the sixteenth century the pueblo has accepted the Catholic faith. But this faith is superimposed on a background of still older beliefs, age-old Indian creeds centering on rain, fertility, and harvest. The Taos farmer has a great many gods to whom he turns for help: gods of crop growing, planting, plowing, hunting, irrigating, livestock raising, and various other great crafts and skills which comprise a farming life. He believes, like his forefathers, that for every work or duty in life there is a power which can perform the work with perfection.

Festivals, dances, and ceremonials of the tribe are likewise of agrarian background, concerned with sunshine, rain, and fertility. Taos government likewise rises naturally from a rootbed of farming. Back in 1626 Philip II of Spain granted to the pueblos of northern New Mexico complete tribal control of their villages and lands. This decree was in turn confirmed though not immaculately kept by Mexico, and in 1863 by the United States. Since 1620 the seventeen pueblos of the upper Rio have held more than 5,000 elections. During these centuries there is no record, or even rumor, of election fraud, miscount of votes, illegal delay, or usurpation of office by one not fairly elected.

During the centuries tribal offices have not changed. There is the

governor, usually an old man; the lieutenant governor, usually a young man; the fiscal, or sheriff; the alcalde, a sort of judge or arbiter for any misunderstanding which may arise within the pueblo; the war chief; the tribe council. All officers are elected annually by ballot or spoken word.

Taos government endures as a long-tested agrarian government, essentially self-sufficing, though it accepts from the United States a common school and a manual training and agricultural high school. Most of its government life is concerned with farm problems. Nowadays the council sees that each tribesman is equipped with capable gardening tools, rakes, horse plows, harrows, wagons, and harness. There is available one good tractor, a modern grain harvester, and a gristmill.

Taos life is a rather successful blending of much of the old with a little of the new, as Patricia Joran took pains to assure me. Pat is twenty-two, copper brown and soft spoken, the youngest of eight brothers from one of the oldest families of the pueblo. Pat has been away to Indian schools. Now he is home again to become a farmer, having made the choice which falls to all young men and women of the tribe. When a boy reaches twenty-one and a girl reaches eighteen, they must decide whether to remain with the pueblo or to leave it. The choice is personal and final.

Pat and I strolled together down the old back road that leads among the pole-built corral and the railed barnyards. Puffs of smoke climbed from pueblo chimneys. There was a faraway murmur of voices as pueblo wives worked before their outdoor ovens. Late sunlight turned adobe walls to rich gold. Pat smiled and said, "It's old and clean here. And it's good."

As a farm reporter I regard the Taos pueblo as one of the most significant farm communities in all the Americas. As a farm realm it is poor but highly self-sufficient. Its proved durability is second to none; a superbly great laboratory in which to study possible remedies for rural poverty—remedies both preventive and curative.

Perhaps generations, even centuries, must pass before the great example of Taos can be widely adapted by impressive numbers of our rural communities. As an agrarian institution Taos is definitely more advanced than most of rural America. Its ability to dispense with prevailing standards of cash income, its gallant defense against

misguided or pernicious meddlings by white man's government, its vigilance against extraneous contamination are feats truly heroic and amazing.

The Taos are greater agrarians than the Navajos. They are only slightly less persecuted and plundered. Individually they are perhaps as poor as the Navajos. Their lands, superior to those of the Navajos, are still definitely below the averages of the white man's West. Taos attainments in community government, like their specific practice of dry-land farming, live on in distinct superiority to anything which white Americans have yet convincingly attained.

And it may be recorded that no white Americans, however poor, have endured the persecution, snobbery, foul dishonesty, and audacious misrepresentation which have been, and alas still are, the white American's gift to his red brethren.

Here is hardly the place or the time to recite again the heart-rending and apparently incessant story of Indian persecution within the United States. The latter saga is handsomely sufficient to cause any American cheek to scorch with blushes, or any American knee to bow in abject humility. During the past ten years I have done considerable reporting through and about our Indian "services." I have visited most of the larger reservations, Indian schools, and workshops of the western tribes. I have sought to be objective and just in estimates and criticism. I am convinced that United States Indian relations continue to stink; and that pernicious and frequently dishonest meddling characterizes the perennial juggling of Indian affairs by arms and tentacles of the federal government, by greedy state governments, by corrupt township and county governments in and about the reservations. Indian moneys continue to pay for scores and hundreds of bridges, roads, schools, irrigation canals, and grass-improvement programs which Indians cannot, or do not, use. Railroads and oil companies still steal Indian reservation resources by the most flagrant and obvious processes of fraud.

Yet Indian survival and increase is one of the most amazing realities of rural America today. It grows into a confusing saga of rural poverty and into a miscellaneous hodgepodge of suggestions for thwarting such poverty. The great majority of American Indians are country people who without inheritance or consistent subsidy have been spilled on the most hopeless lands of this nation. It seems

to me that the standing miracle of Indian survival offers the following inferences:

1. The tribal or communal government generally common to most agrarian tribes of Indians bolsters and foundations the survival of solvent rural communities.

2. A rural citizen can endure vastly more oppression than a more highly synthetic urban population. Land and rural social structures are more absorbent of population increase than are those of town or city structures. The historic fact that only those American tribes with strong affiliations with, or tethering to, agriculture have successfully weathered the past half century is become a high tribute to possible conservation of men by way of land.

3. Acts of intervention or control measures instituted by the federal or state governments are highly dubious of benefit. Habitual attitude of state and local governments has been and to a large measure remains one of destructive greed, which relentlessly seeks to snatch away tribal properties and resources and to apply them for the good of the state or local government unit, or to expropriate Indian wealth by political fraud and conspiracy. Indian policies of the government, though intermittently benevolent in purpose, continue to prove highly destructive in application. The lesson of the rural Indian definitely becomes a plea for noninterference, non-meddling, and *laissez faire* on the part of the white man's government. The pueblo Indians, relatively independent of government pestering, are faring definitely better than the Navajos, who are now plagued by an all-time high of federal meddling.

4. Economically and socially the problems and conditions of the poor rural Indian are closely similar to those of a far greater population of rural white people and Negroes.

8

POVERTY ON THE OCEAN FRONT

OCEAN fishing must have been the first majority trade of white men in or near North America. Certainly our North Atlantic waters were renowned strongholds for commercial fishing long before the times of Jamestown or Plymouth settlement. What is more, since landing villages or supply stations and drying grounds were indispensable to marine fishing (early sea-fish catches were usually dried in the sun and on land), the first white communities on these shores must have been fishing depots. These may have been tiny and otherwise insignificant hamlets. But almost certainly they were the first white towns of our land, and around them may have sprung the first white man's gardens and fields—for provisioning fishing craft for homeward voyages of from sixty to a hundred days.

This hypothesis is respectfully referred to the Department of Forgotten American History—the mightiest literary resource of this nation.

Land farming and sea farming continue to hold significant similarities. When times are hard on land and poverty spreads over rural spaces the times at sea are hard too.

In 1497 when Explorer John Cabot reported an abundance of cod off Newfoundland his report threw half of Europe into a pioneering frenzy. The year that saw Sir Francis Drake's circumnavigation of the globe saw also more than three hundred fishing craft sailing from west European ports to fish for cod in North American waters. Great Britain, France, Spain, and Portugal scrambled like fighting dogs to gain supremacy of those fishing banks. Eventually Britain won and Britannia ruled the fish.

For the past five centuries cod has been king of ocean fishes. For almost two centuries British statesmen looked upon colonial America as a codfish duchy. In the old statehouse at Boston you will see a commemorative codfish, stuffed and mounted for posterity to behold. This taxidermic fin-bearer symbolizes the birth and babyhood not only of Massachusetts commonwealth but, to a considerable extent, of the entire United States.

Today salt-water fishing remains the career trade of at least 120,000 Americans who employ about 3,700 fishing vessels and 70,000 fishing boats for an annual sea-food catch of 3,000,000,000 pounds. The wharf value of this harvest is in the neighborhood of \$100,000,000 a year with an ultimate value of three times that amount. As one instance of piscatorial profits it is worth noticing that each year the Alaska salmon pack of itself returns about \$40,000,000, five times the original cost of the entire Alaska Territory.

In earlier days cod was the only important commercial fish. Today the market list of sea foods includes some thirty food fishes and sixty salable sea products. The list is growing. Sea and shore industries are entering a new era of salt-water inventiveness. Perhaps for the first time fishing industries are beginning to *farm* the ocean rather than merely to plunder it, even though sea-fishing remains one of the most stubbornly independent of all American trades, an age-old saga by man alone and against the sea.

Today the career fisherman is becoming a legitimate farmer of the brine. His harvest season averages half the year. Hooks, trawls, drags, seines and nets are his seed. Dories, traps, trawlboats, schooners and mother vessels and their riggings are his implements. The colossal and little-known range of ocean life is his range of crops. And apparently poverty is his heritage. Like the farmer of land he craves the chance to work and to earn a way to economic justice.

On our own shores there remain islands and coast communities where fish is Lord High Everything. Fishermen's wives continue to rise at two in the morning to cook giant breakfasts for men who sail by three in order to count catch before noon, which is usually curfew for open fishing. Lobstermen and crabmen still tend their lines of traps (or "pots") even though the thermometer may stand at 40° below zero. Fishermen's wives and children still spend long

days ashore, baiting trawls, stretching and drying nets, and mending rigging.

It is a hard life and a meager one. The trade lacks cushions, shock absorbers, and silk panties. It calls for strong backs, thick biscuits, great gumption, and fighting hearts. But it is an essentially American game and the fishing coasts remain superstadiums for the perennial American genius of pioneering.

If a man really wants to ride herd on ocean farming and to follow the outermost frontiers of the big brine, he does well to serve a term on a fishing vessel. He will probably have to "hire on" as a crew member, since fishing vessels rarely take paid passengers.

If he wants the acme of American fishing tradition he can ship out with the Gloucester "fleet," which remains the most renowned of all cod and mackerel catchers. About 135 documented fishing boats with registries ranging from 10 to 125 tons name Gloucester, Massachusetts, as home port. Their crews average from four to fourteen men (never thirteen).

Crew members are "good guys" in the main, and hard workers, gracious company, and master yarn spinners. In recognition of yarn-spinning talents, one Gloucester skipper posted this notice on his foremast: "In order to help pass the time, and as a random effort to establish lying as a profitable calling, one quart of Demerara rum is offered to the man aboard this vessel who by a majority opinion has told the biggest lie."

Usually a fishing company owns the boat and its equipment and provides necessary food, fuel, and lubricants. The "stock" is the gross proceeds from one or a series of fishing trips with the same crew. As a rule the company deducts fuel and food costs from the stock and takes out cook and engineer wages. The rest is split, half for the company, and half in equal shares for all members of the crew. The skipper gets from three to ten shares and sometimes a profit royalty in addition.

Nobody can be absolutely sure just what, if any wages, he is going to earn. Thus the crewman is more than hired help. Whether skipper or trawl baiter he is a partner in the enterprise. Therefore, vessel fishing remains democratic and hard precarious work. There is a distinctive, all-masculine splendor about crew life. Boat fishermen work hard and eat well.

Crew quarters are tiers of narrow shelves down the fo'c'sle; the

size and shape of an old-fashioned ironing board and approximately as soft. The last man aboard gets last and worst choice. You climb into your coop at dusk, wrap yourself in a cocoon of blankets, and expect to be roused out in pitch darkness at about three in the morning.

That is not quite so bad as it sounds. For a welcoming fire in the galley stove and the mess table are within easy lunging distance of the bunk shelves. Thus you quickly learn the polite art of rolling out of bed and landing without a wasted blink immediately in front of a hot plateful of ham and eggs, toast and jelly, and a man-sized schooner of black coffee. You also learn how to weld your elbows to the table board as a natural defense against rough sea or crewmates with longer and faster reaches. You are not pestered by such feminine-minded decadences as face washing and shaving. You can not possibly look any tougher than the man next you. And you need not "mister" anybody. It is strictly a first-name commerce.

There is no really dependable routine of working hours on a fishing ship. That is for the fish to decide and the lookout to identify. Mackerels ply in "schools" numbering high into the thousands, or perhaps millions. When hungry the mackerel swarms come near the surface to snatch a meal of floating spawn or other surface-water foods. The smart lookout for fish begins by gathering testimony from eyes which are sharper than human eyes—the gulls, gannets, porpoises, or dogfish which are also waiting for mackerel schools to plow the surface.

He also judges from varied appearances of the surface water, such as the oily wakes which frequently follow the motion of great hordes of fish. When anywhere from three to a dozen schools of mackerel "show" at the same time, a well-trained nose can detect them. Moreover, an experienced lookout develops impressive power of vision. When he yells "school" he is usually right.

Actually the fish lookout is the most important man aboard. Success or failure of the voyage depends largely upon his vision and judgment. It is generally his say-so which decides whether the crew lounge in the sun or labor day and night.

And you can never be sure when a fish lookout may become owl-eyed. "Owling" is night fishing. Its success depends upon a smooth sea, light weather, and the dark of the moon. Under such conditions an expert lookout can sometimes spot the phosphores-

cence which marks the surface notions of mackerel schools. But owlng is a tough gamble.

Sometimes a lookout becomes so expert at spotting fish that his services are immensely valuable and his fame spreads along the fishing front like a December fog. Stories of his prowess become folk tales of the shore line, and therefore increase and multiply like hot news on a rural telephone line.

In any case it is the job of the fishing boat to follow the fish. That means travel in unpredictable amounts. For purposes of economy rather than picturesqueness, a good part of the "skimming" is still done under sail. You will see some of the best and most modern boats getting canvas to the wind before they are ten minutes out of port. This helps perpetuate the tradition of the grand old fishermen's races. When rival boats "load out" with catch at approximately the same time, the next task is to find out which ship can get to port quickest and devil take the hindmost. Such races call for every available pound of motive power and hark back to the heroic days when Skipper Tom Bohlen of Gloucester squaring home with a full catch used to order every stitch of canvas set to wind, including the cook's drawers.

In open-ocean fishing loading the hatches is a matter of God's will and man's skill. You may hit a "strike" the first day out of port, or you may spend a month at skimming. When the big moment comes it just comes.

The lookout whoops the glad tidings. The helmsman goes into a clinch with the wheel. Somebody spreads the news "we got fishes." That is the time to reach for rubber boots and start pulling on oil-skins. The skipper rouses to command. If the haul is mackerel, the first task is to bring alongside the seine boat, which is usually towed by a "painter" rope or hawser. The seine boat is an oversized dory or rowboat, big enough to carry eight or nine men and as many as twenty tons of fish, which is a good catch for one drag.

The purse seine is now the standard type of net. It is 12 to 18 feet wide and 60 to 80 long. The seine is floated by means of a top-line of about 2,000 cork floats. The purse line, usually 700 feet long, passes through brass rings suspended on loops regularly spaced along the lower end of the net. Seiner's strategy is to circle the fish school and close in the net as one fastens a billfold. Outer sections are lifted first and the catch is cautiously scooped into the

boat, then hoisted aboard the mother vessel where it is "slit" and packed in ice.

When the drag is called, the crew loads into the seine boat while the skipper has himself lowered in a small dory to direct laying the net. When he orders "Give twine!" the seine throwers begin getting the net into the water, clearing the corkline away from the boat. That is a tense moment. The fish may dunk out of net reach or change direction too abruptly. If either happens, it is a "water haul," or dud. Worse still, the net may snag on bottom rock and send up nothing but bare rope. But good fishermen breed their own good luck. Therefore, nets still rise bulging with clean fair catch. The purse seine is one of the most expensive and efficient types of ocean-farming equipment. Yet if it can actually haul in a hundredth or even a thousandth part of the fish school the drag is a lucky one and fishermen may rest secure in the knowledge that they have left plenty of fish for posterity and the sharks.

School fishing is still pioneering. Mechanically it is an old trade with a number of new accessories. But it remains a trade of the venturesome. For it offers hazards to lives as well as to property and profits. And school fishing is a trade of great individuality. Ten thousand fishermen will probably display at least 10,000 highly original ideas as to how their trade should be carried on.

Yet any fisherman knows that nets can be filled and trawl lines can be made to sag with catch of one kind or another. The big rub lies in catching the right kind of ocean produce and in making efficient use of it after it is caught. School fish are an eccentric harvest; they move and vary according to rules which no man can fathom. The catches seem to follow recurring cycles. The twenties and early thirties saw a cycle of sea-fish scarcity. At present the fish cycle seems to be one of returning plenty. The Atlantic now seems to be bulging with edible fish, and therefore the newer conservation practices are becoming a matter of better packing and marketing of the products.

This means that a substantial part of today's salt-water pioneering is being done ashore. More than half the live weight of the best meat fishes is waste. Fish and sea-food canning, now a \$100,000,000-a-year industry have helped in reducing waste. Improved butchering, freezing, and faster transportation are also helping. The once-great trades in salt and dried fish have largely given way to frozen

or frosted fish. Manufacture of fish glues and adhesives from packing wastes are a notable step in conservation. The growing industry of fish-liver oils is another. Fish meals for poultry and livestock feed are still another. One of the more bizarre of the new sea industries is manufacture of artificial pearls and other imitation gems from fish scales.

According to numerous hypotheses life of the land began in the sea. Today there is good reason to believe that life of the sea may help further in maintaining and bettering life on the land. Shore fish are becoming one of our most promising domestic sources of fertilizer. The fact that so much American soil is fast losing its fertility and that the principal sources of fertilizer concentrates, particularly nitrates and potashes, have heretofore been foreign throws a net spotlight of interest on sea industries as a means of renewing the fertility of our soils. On a tonnage basis no other comparable fertilizing material is so inexpensive. Porgies, one of the cheap food fishes of South Atlantic waters, are now being "worked" almost exclusively for fertilizer materials.

Like the land farmer, the real fisherman is a comparatively independent producer of foods and industrial materials. To be a competent producer he must know the water and ocean bed beneath him as well as the inland farmer must know his soils. Nowadays a capable farmer needs to be Jack-of-many-trades: plowman, carpenter, mechanic, executive, bookkeeper, and auditor, and possess perhaps a dozen other skills. But a good fisherman needs to be Jack of still more trades and skills. Today ocean fishing is actually from ten to fifty industries merged into one. Like the land farmer, the raiser of a given ocean crop may work the same area year after year and rarely miss a catch. His entire operations may be confined to a few acres of salt water. And brine farming, like land farming, mixes the adventure of harvesting known crops with the thrill of discovering new ones.

The scallop is one of the newest and most important discoveries among deep-sea crops. Today it is one of the whitest hopes of North American sea and shore industries. The scallop is a salt-water mussel. Its edible portion is the button muscles which press the thick flat shells together. The harvest requires big boats and deep heavy drags. In most American waters scallops are listed as a winter

crop with a season stretching from the first of November to the first of April. This makes it a rough, cold harvest with exceptionally heavy work for the boat crews, who must pry and cut the giant mussels aboard ship, toss the great bulk of the catch back to the sea, and pack the white "poker chips" of meat into canvas bags or iced tins.

If you happen to be a scalloper above a good shoal you will get little time for such formalities as sleeping, shaving, and toothbrushing. When the dragging is heavy, work schedules are usually six hours on and two off until the catch is stowed. After two or three days of this a man grows so tired that when his stint of "shucking" is finished he simply falls to the deck and sleeps. Now and then he rouses to eat a bowl of chowder and swig a cup of black coffee. But such niceties as taking off boots and overalls and going to bed are usually out of the question as long as the catch is pouring heavy.

There is a real parallel between the opening of an ocean scallop shoal and frontier breaking by land. Some bold spirit must have the hunch and risk the money and work. Once the find is made men and money pour in from every direction. Twenty years ago the great scallop shoals of Penobscot and East Penobscot bays were unknown. Now they are being worked regularly by more than a hundred fishing boats. The great Georges Bank scallop beds were first opened in 1927 by two Maine fishermen, Captains Charles Carver and Sumner Whitney. Simultaneously they "got the notion of scallops off Georges." They joined in partnership and built a special boat at a cost of \$22,000. In order to do this they mortgaged their homes and chattels, scraped and borrowed every possible penny. It was a far shot that hit center. The first season of scalloping paid for the boat, paid wages and supplies for a crew of ten men, and left money to spare. A first three-day haul brought in 5,000 gallons of "shucked" scallops. The bed was a "gusher." Next season about fifty boats were on hand to join in the dragging. Between 100 and 150 vessels now work the shoals.

Oysters are a salt-water crop now being mapped and planted in "fields" and harvested even more painstakingly than a crop of wheat or cotton. But the new style in clam propagation is a still better example of how a staple sea food is being changed to a staple shore crop. Common soft-shell clams, most abundant along the New England coast, are harvested from South Carolina to the

Arctic Ocean and are comparatively well adapted to Pacific shores. The bivalves plant themselves in mud or sand flats, usually between high- and low-water marks. All one needs to reap the harvest is a pronged hoe, a basket, a pair of rubber boots, and a strong back. During recent years most of the clam flats have been overdug. Thousands have been completely destroyed by overgreedy harvest. As early as 1910 the French government undertook scientific experiments in clam "ocean culture." Today various nations and several of our own states are following suit.

Progress and profits in clam farming depend on several bits of natural history. We know that clam spawning takes place between June 1 and September 1. This period is the logical closed season for digging. The clam reaches spawning age during its second year and throws millions of eggs into the water. After hatching the embryos swim for about twelve days, then anchor themselves in shore-line mud where they feed on microscopic plants carried by the tide. About a third of the clam organism is edible and highly nutritious. The length of life is from ten to twelve years, but the two- or three-year-old clam is the best food size.

Clam farming, therefore, is a simple sort of tillage. It consists of scraping or harrowing suitable tide fronts, usually with tractors, and planting live "seed" (pea-sized or larger) much as one would drill corn or sow grain. The growing period is two years. An acre of good clam flat then holds about 1,000 bushes. Nowadays one sees ambitious attempts at clam farming along the Maine and Massachusetts coasts. Maine, with 500,000 acres of tidal flats suitable for clam production, is opening a clam experiment farm near Friendship. Several other Atlantic states are considering or experimenting with state-operated marine farms which may prove profitable through levies on increase of catch.

But legal supervision is one of the hardest tasks of the fishing front. It is already apparent that continued development of marine farming will call for more competent definition and protection of ocean property rights. The first protective laws in American sea fishing were enacted in 1812 by Massachusetts on petition of Provincetown. Since then literally thousands of sea-fishing laws have been made and every year hundreds more find their way into statute books. But the ancient "riparian rights," which tend to grant any citizen the right to use water resources so long as his use is of a

productive or self-sustaining nature, prove a persistent source of judicial headaches and legal entanglements.

Inland law, as a rule, grants individual ownership of land as far as to low-water mark. The great bulk of marine farming and a good portion of all sea-fishing industries are within the three-mile shore limits, or "national waters." But even national waters cannot recognize protected private ownership of sea. Shipping commissions or "international law" to the contrary, open ocean is essentially a realm of anarchy.

First roots of America were planted in comparative communism. Our earlier generation of trappers, homesteaders, and fishermen had merely to make personal claims to the harvests of great resources which belonged to the whole public. Land is now owned under legal title and private deed. But, legally speaking, the wealth of the sea still belongs to all men who can devise ways and stratagems for taking it. Ability to shape and apply individual codes of law and of work remains the real genius of our fishing front.

Such individuality must be first nature in lobstering, by ripe tradition the most completely self-sufficing and independent of all the fishing trades. Taking the Atlantic Coast as a whole, lobster farming represents the most ambitious and the most complex step in ocean agriculture. Lobsters are strange creatures. They are stupid, ugly, and ill-tempered. But they are food for gourmets the world over and pound for pound are the most valuable of salt-water harvests. Moreover, for the past three centuries the story of lobstering has shaped itself into the essential story of ocean fishing. Good lobstering means good times on the fishing front, and bad lobstering means bad times.

The lobster range takes in a strip of 1,300 miles of Atlantic shore line from the Virginia Capes to Labrador, a rocky coastal lane from thirty to fifty miles wide. Pilgrims began fishing lobsters from Massachusetts Bay early in the seventeenth century. Massachusetts held a virtual monopoly on the industry until the nineteenth century. Then the great beds on the coast of Maine were tapped and during recent generations the trek of the lobster has been northward along the rocky shores.

In Nova Scotia a few old-time lobstermen can remember the days when lobsters were used to fertilize the fields. Coast farmers used

nets to drag them in, loaded the squirming lobsters on carts, spread them over fields and gardens, then plowed them under. Before that, lobsters used to be speared or hooked in shallow water, scooped into hand seines, or captured with long wooden tongs. Nowadays they are caught in traps, or pots, which are weighted and lowered to the floor of the sea. Location of each trap is marked by a wooden buoy or glass bottle. Most lobstermen paint their buoys a distinguishing color.

The most common type of trap is 4 feet long, 2 feet wide, and from 1 to 2 feet high. The frame is of strong wood from which are sprung three arches of spruce. Laths are nailed to these arches at intervals of about two inches. One side of the trap has a hinged door. The head is made of netted cotton strung to a funnel bow six inches in diameter. This is set obliquely to the long axis of the trap, and the head is drawn in to form an upwardly directed funnel.

To reach the bait, which is fastened to an iron spike in the center of the floor, the lobster must crawl up the funnel and pass through the entrance ring. Once a prisoner the creature is usually unable to find the entrance.

A hard-working lobsterman keeps a "string" of from 75 to 150 traps. He hauls the traps and catches in his dory, a fat little shell boat. Nowadays most dories have outboard motors. But there are still some sail dories, and oars remain standard equipment. If the motor goes dead, a man has to row to shore, sometimes in the face of a sea which would crush a frail boat as easily as a housemaid smashes the soup plates. Lobstermen "pull" the traps when practicable and try to follow the motion of the crop. In summer they fish in shallow waters close to shore. In winter they frequently go out five or six miles and set traps in water more than a hundred feet deep. Even so, the traps are sometimes caught in ice and carried away. But there is rarely any loss by theft—lobstermen do not steal.

The best way to learn about lobsters is to talk with a man who has been lobstering. Therefore, let us notice the views of Gene Loud, own son and career lobsterman of Loud's Island, off the Maine banks.

Gene took to lobstering forty-six years ago. He was twelve then. As a boy he had no chance to go to school. There was no school on Loud's Island. There was no church, or bank, or store. There was no government. For in those days Loud's Island belonged to no state

or nation. Maine did not want it and Canada would not take it. There were plenty of other fishermen's islands in the same civic situation. But now the states have annexed them, except for a few adopted by Canada. Almost all the fishing islands having as many as a hundred people now have a school and church and store.

Gene first went to sea as dory helper to his father. By the time he was fifteen he had a string of traps of his own. He hauled live lobsters to the nearest island store, sold them for a nickel apiece when times were good and traded them for whatever he could get when times were bad.

He recalls that until the turn of the century most sea-food buyers were general merchants who bartered without cash in placid disregard of market quotations. When a lobsterman brought in a catch the buyer might choose to pay him with a chunk of pork. If the buyer's liver chanced to be running poorly, it was likely to be a tiny chunk of rather moldy pork. A hundred-pound catch of lobster might bring a sack of flour and a pair of shoes one day and only a bag of meal and a pair of socks the next. Dealers chucked barter purchases into boats, rarely bothering to sort or grade, and shipped to Boston. Their business records became mere hand-scrawled records of swapping, usually without listing of surnames. "To One-Eye Tom 1 side salt pork for 3 tubs lobster; to Tall John 1 set oils for 6 bu. clams" and so on.

When folks begin talking about the "bonny old days of lobsterin'" and how the trade has faltered, Gene Loud remembers what the bonny old days really were like, when individuals went out and plundered the sea and got plundered when they came back to shore. He is thankful that a lobsterman can now sell a catch for cash. But dealer prices remain oppressively low. When lobster consumers pay \$1.50 a pound for the meat, the fisherman is lucky to get 20 cents at the buying dock. He is a habitual victim of innumerable price conspiracies. When catches run heavy, fishermen's prices take unexplained dips. A mysterious telepathy plays along the thousand-mile line of lobster buyers and prices slump again and again even when jobbing and retail prices show no weakness whatever.

The result is that lobstering, although the hardest and most dangerous of all ocean industries, is the most miserably paid. A team of dorymen—two experienced lobstermen—does well to net \$15 a

week for seven days of hard work. When catches are poor, this entrepreneur's profit may fall to \$5, \$3, or to nothing at all or less. Most lobstermen must still buy supplies from the same dealers who buy their catch. Purchase of gasoline for outboard motor is the heaviest outlay. Next come rope, rigging, and traps. Then food and clothing. Retail prices on the fishing islands average some 20 per cent above those of the United States as a whole.

During forty years of lobster fishing and selling Gene Loud has managed to build a comfortable home and stow a few dollars in the bank, a feat which he still views in profound amazement. His 140 traps, when properly placed and tended, yield a crop of 8,000 pounds of lobster a year. The harvest involves an average yearly overhead of \$1,500 for traps, boats, equipment, repairs, bait, rigging, and gasoline.

Gene does not expect lobstering to be a bed of roses. He knows the coast and the men who fish it. He knows there are hundreds of lobstermen who earn less than \$300 a year. He knows the hard raps of the trade; how it feels to rouse out at three in the morning, put your dory to a rough sea, and face an "easter" at 20° below zero. Gene has seen men come back from a run of trap lines with frozen hands and feet. He recalls the story and principals of two lobstering dorymates who got lost in a winter fog and hit a squall. One froze to death at his oars. The other hove into port with hands and feet frozen; but he brought in a catch of lobsters which gave his mate decent burial and left a few dollars for the widow. Gene Loud finds distinct hope in the fact that the fishing front now begins to regard lobsters as a recurring crop instead of a momentary grab. It is high time, too. During the past quarter century most of the great lobster grounds have been "trapped to death." In Maine the catch was 19,000,000 pounds in 1910. In 1939 it was less than 5,000,000. Rapid depletion has led to state and federal co-operation in founding lobster "rearing stations," super-modern lying-in hospitals for the grouchy crustaceans.

In these hatcheries egg-bearing lobsters are placed in salt-water vats where the eggs are shed and hatched. Then the baby lobsters are fed carefully vitaminized food until they are big enough to be planted along the coast line. In native habitat it is likely that only two or three lobsters out of a brood of 10,000 grow to market size.

With the new style of hatchery it is hoped that the survival may number as many as fifty.

In the big lobster hatchery at Boothbay Harbor, Maine, a weary-looking attendant rested from the monotonous job of feeding baby lobsters. The prescribed baby ration is strictly nonmaritime. It is ground pig's liver fed into the salt-water crib through a fine-meshed strainer. The attendant scowled at the crusty heirs apparent. An irate mother had nipped his thumb and that member was extremely sore. He also scowled at my obvious question and replied, "I'd like lobsters boiled."

Since fishing is a trade of dogged, almost perpetual motion, since the pioneer spirit is as necessary to the fishing front as boots or boats, there is little doubt that the new generation of American fishermen will see the coming of many new and valuable harvests from the ocean. Just what the future harvests will be, God alone knows; and as a rule God does not reveal.

And neither God nor man has yet revealed what solution will be found for the fisherman's tragedy of poor prices for his catch. For prime cod the fisherman usually receives 75 cents to \$1.50 per hundredweight; for mackerel, 60 to 75 cents; for swordfish and haddock, around \$4; for lobsters, 9 to 20 cents a pound; for sardine herring, 10 to 40 cents a hundredweight; for bait fish, an average of 50 cents a pound.

These are murderous lows which deliver no price benefit whatever to the majority of consumers. It is true that ocean foods are highly perishable and must be processed with great waste and shipped and stored at heavy expense. It is true also that the control of sea-food products is highly monopolistic and that no federal or state authority has yet made a creditable effort to investigate or remedy the knavery of sea-food distribution. To date all federal subsidies to the fishing industries have gone to processors and dealers, not to the fishermen.

The land farmer is a hybrid of proprietary capitalist, day laborer, and miscellaneous tradesman. Much the same can be said of the career fisherman. If he is an independent or a "team man" he must provide his own boat rigging, seine, and trawl or traps. His overhead includes almost perpetual risk of loss by storm, fire, or freezing.

He follows one of the most hazardous of legitimate trades, endures exposure to cold, sun, and storms, and probably spends more hard labor for a dollar than any other American worker. Fishing crew pay is more pitiable in smallness than the average of farm hard wages.

In estimate common to the public, fish industries live in competition with farm industries. Experts of the United States Bureau of Fisheries have estimated that edible sea foods available to the American shore line could fill the meat needs of the entire nation. Considering the restricted distribution of sea-food products, this possibility blends into sheerest fantasy. But the possibilities of plants, fishes, and other sea life as a widespread source of renewed fertility of the soil is tremendously challenging—and far from new. Any school child knows how the Pilgrims planted fish in corn hills so that the grain could flourish. Old-school "coasters" remember the days when sea-front fields were made fertile with the harvests of seines and nets; when shore-line farmers traveled and seined to build up the lives of their fields.

Decline of soil fertility, stubborn increase of erosion, and demands for more intensive farming on fewer acres again throws the spotlight of agrarian interest toward the fishing coast. Once more the wealth of the sea may help restore the wealth of the land.

9

TIMBER

TREES are the greatest crop of this country. The total remaining forest acreage is more than a fourth of the land surface of the entire United States. We have more land in woods than in all cultivated crops, pastures, and ranges combined.

Our woodlands cover an area three times that of France, nine times as big as Minnesota, sixteen times the area of the state of Pennsylvania. The real American El Dorado is in our woods rather than in our gold coasts. All the gold that has come out of the Western Hemisphere since Cortez and Pizarro looted the Aztecs and Incas is probably not equal in value to our forest products and their manufactures in a single year. Back of the 20,000 lumber mills now in operation are forests equipped with more than 30,000 miles of logging railroads, with thousands of tractors, chutes, flumes, dams, canals, tugboats, rafts, cableways, aerial trolleys, and other log-moving equipment which requires a total of 200,000 workmen to operate. Wood continues to build 80 per cent of all American homes and to furnish 90 per cent of them. We still have 135,000,000 acres of virgin timber. Use of these forests represents a \$10,000,000,000 investment of capital, jobs for more than a million Americans, and a yearly money return half as great as total earnings from farms.

This timber is our primary resource best suited to conservation practice. Unlike mines or oil fields, forests can be replaced as they are used.

The United States is still the world's leading consumer and one of the greatest exporters of wood. The first cargo of American goods ever exported to the Old World is said to have been a shipload of cedar logs sent from Jamestown Colony. Then for more than a

century pine was the principal American export. Now fir is our greatest export timber, pine our greatest industrial timber, and oak the most valuable of all major timber crops.

The new story of American timber becomes a story of transportation as well as conservation. Seventy years ago timber sources were largely local. By 1914 the average haul necessary was 360 miles. In 1924 it was 726 miles. In 1938 it was approximately 1,100 miles. In the northeastern states logs must travel an average forest-to-market distance of 840 miles; to the Lake states, 910 miles; to central states, 1,515 miles. From the Pacific Northwest to the consuming markets of the East the average rail haul is 2,600 miles and the average water haul is 6,000. About 40 per cent of our timber crop still goes to market by rail. This pays the railroads \$400,000,000 a year. Between 8 and 10 per cent of the crop goes to market by truck or barge. Most of the rest must go by water, either aboard ship or by direct float, for the first lap of the trip. Water now carries half of the Northwest fir harvest and 60 per cent of the northeastern pulp wood.

In all there are about 1,770 kinds of trees growing in the woods of this nation. During the past decade our commercial uses of wood have increased from 2,000 to 4,500.

Unavoidably the problems and resources of timber are woven into problems and resources of most of rural America. In any one of twenty states poverty of trees can and does shape poverty of rural lives and rural institutions. Here are some passing sketches of rural Americans who work timber; of their work, progress, and poverty.

Pete Dahl disposed of me first. The bull of the woods merely looked at me askance as a colossal elephant might eye an extremely small mouse, then indulged in a long and eloquent silence. Then he shifted to old Willie Byron, the logging skipper.

"You big he-man sailor what's lost his ocean! Yeah, you drive a laggin' boat up any creek big enough to float a walkin' stick. Yeah, maybe you don't recollect two years ago this April you got stranded off Ragged Lakes. Uh-huh, you start up a trout creek in heavy fog. You go honkin' along till afterwhile you can't see nothin', so you tie up for the night. Next mornin' fog lifts and there you set, stranded on high dry sand in a boat. You rub your eyes, and you say, 'B'God, I skidded for fourteen miles on nothin' but dew!'"

Skipper Willie, pilot of a two-man tug during springtime log

booming, caressed the greasy seams of his boots and favored Pete Dahl with a bright blue sluice of damnations. "It's dumb Swedes like you that tie up a man's operations."

Pete pretended indignation. "My trade is lumberjackin'. Not diggin' a ditch."

Skipper Willie's blue eyes sparkled beneath his mop of foam-white hair. "You warn't diggin' a ditch this mornin' when you busted a pick point into that airyplane pontoon."

The statement stopped Pete Dahl like a bullet. The bull of the woods couldn't deny that he alone had queered our take-off. We had started a flying tour of the Allagash basin to check up on channels of log-driving streams; that is, a water route. In summer all planes become hydroplanes because it is impossible to find a reliable landing field back in the big woods. But water is so plentiful that with a good set of pontoons you can set a plane down on the lakes or rivers and take off again, provided, of course, you don't snag a drift log. In winter the forest pilots use ski gear. Here at the end of winter our pilot had made a superb ski landing in a slushy snow. We tethered the plane and spent the night at Pete Dahl's hermitage of a wintering cabin. Pete was necessary to the undertaking. Besides being a master lumberjack, he is one of the greatest log drivers on the Allagash, or indeed in all Maine.

But the plane's pontoons immediately froze in mush ice. We had to dig out. Pete brought out a pick to help along with the work. But his foot skidded on the ice and he smashed his pick point squarely into the head of the right pontoon. A debutante's regard for her dancing slippers is feeble in comparison with a hydroplane pilot's regard for his landing pontoons. So Pilot Crenshaw asked us kindly to get out of his sight until he could clear off the gear. Pete asked us back to his shack to wait.

The monkey stove was welcoming and our host was interesting. For Pete Dahl is a true-blue American lumberjack of the old school. Motion-picture thrillers notwithstanding, Paul Bunyan is not what he used to be.

Gone are the days when a team of superlumberjacks could fell a "punkin" pine or a Douglas fir with a body log worth \$1,000 cash in a forenoon and offer an encore during the afternoon. The era of long logging is fast coming to an end. There is not as much tall

timber as there used to be and the demand for big logs is only a pitiful shaving of what it was a quarter century ago. Pulpwood is the big item nowadays—for paper and plastics. And pulp is an industry of small logs corded in four-foot lengths. This is a job for bucksaws and handaxes; with water hauls for the bark timber and truck or rail haulage for baby logs which are ready peeled, or "spudded." A pulp cutter is only a woodcutter—which is hard on the vanity.

But Pete Dahl can take it. He is a stouthearted citizen with plenty of muscle. He knows that the real Paul Bunyan of today is the "pollywog" who actually drops, tops, and drags out the timber; not a romantic shade, but a producing realist—at least until the spring drive begins.

At that time the toils of felling, topping, and bark peeling become remote and even the pulping woods stage an annual carnival of log driving. The big woods have creeks, rivers, and ponds by the thousands. Water is still the world's cheapest transportation, and the final destinies of timber stay pretty well wedded to H_2O .

Spring thaws break away the ice and put the creeks to roaring. That is the time to get logs to water. That is the time when saw pushers, ax swingers, log snakers, road crews, camp cooks and bosses alike, in fact all the better caste population of a logging camp, change to rivermen. River driving remains a trade within a trade. It is the yearly metamorphosis which causes the lumberjack, land animal and chop specialist that he is, to trade saw, ax, and peeling spud for cant hook, pole, and bateau, and to join in a water carnival that is usually gay and abundantly insane.

Skipper Willie raised his gnarled radish-red hands in a gesture of despair: "Ever'where is open water. Yet here we set, toastin' our toes and chinnin' with a grouchy old rooster a hundert miles from a log pile."

Pete Dahl pointed out that he was merely tolerating us until the plane could lift. "After that," Skipper Willie wailed, "we got to have you around for six weeks more. Sweet Jesus, what did we do to deserve such a misery!"

There were loud knocks at the door. Pilot Crenshaw pushed in to say that the plane was clear of ice and all set. We got into our coats and mittens, clumped out to the plane, climbed into the dainty

red seats. Earl Crenshaw began to fondle the hand throttle. The motor was warmed and the big instrument board free of frost. "Sit tight. There'll be plenty of air pockets." The plane quivered slightly, then began easing forward into soft snow. The pilot pulled for the sloping riverbank to take on speed. Then he lifted and we were away over the green balsam groves and the yellowish river, circling into a clear turquoise sky of eternal Maine.

Skipper Willie shrilled into Pete Dahl's ear: "If it warn't for your onery behavior, for two-bits extry we'd carry you right on up to heaven—even if you are a dumb bull of a lumberjack."

Pilot Crenshaw, who became a thoroughgoing democrat through service in the Royal Air Force, put Willie in his place. "In this detail everybody's a lumberjack."

Pilot Crenshaw failed to add that he is probably the nation's first forest pilot. Besides spotting fires, he does an enormous amount of survey and photographic work above the big woods. He helps forest engineers, or "cruisers," in selecting strategic locations for logging camps and operating areas; frequently carries supplies and medicines, or doctors, into remote camps; sometimes drops hay and chops trees for the benefit of winter-starved moose and deer. He checks on spring thaws and scouts the riverways preparatory to log driving. Accordingly, Pilot Crenshaw personifies commercial aviation at its most rigorous: blind flying, force landings, and foul weather details. And not a serious crackup in all his ten years of forest flying!

Crenshaw shifted east toward the vast silver-blue hump of Katahdin, New England's tallest mountain and century-old landmark for the big woods of Maine. He snapped a rubber band across his celluloid protractor. He lit a cigarette and gave the once-over to the seventeen dials on the instrument board. He snorted into rough air pockets above the mountain. The hard bounces seemed to jolt Pete Dahl into a mood of reminiscence.

"Down yander I first took to the woods—thirty years ago. It was fine then. Long logs only. Choppin' trees big as barrels—with tal-low boots and a bellyful of sour bread and blackstrap and beans. No tractors to snake logs with. Only horses. Wear out a four-hundert dolla' hoss in one winter. Build log skids to the rivers. Snake out long logs and end 'em to the skids . . . bounce fifty

foot and smash down so hard sparks would fly. Stem she would hiss out when logs hit the water. That was big timber."

Skipper Willie fired his pipe. "Cheer up, bull. They'll be long logs to drive now."

"Yeah?"

"Yeah, plenty long to start jams. Long enough to dynamite."

The pilot tapped his window. Below us was the yellowish, snow-roused channel of the Penobscot. "How does she look, boys?"

We headed back toward the Allagash and circled down. At 4,000 feet we could see the logging camp well, the white axles of roads which led from a black infinity of woods to a hub of squatly board shacks. Pilot Crenshaw dipped for a free field of snow, observing that he would be blamed glad when weather and water got right for straight pontoon landing.

"Hold everything!" Broad runners slapped to thin snow. Crenshaw nosed the propeller high and closed the hand throttle. The landing gear was taking a terrific spanking from terra firma, and so were we. The right gear careened dangerously on a covered log, but the pilot swung in time to save a turnover. We climbed down the foot ladder in profound relief. A crowd of lumberjacks in faded dungarees tramped out to meet us. Skipper Willie said, "Let's eat." Tommy Kelley, bald and beaming red of complexion, approved. Tommy is the "super"—to be more formal, the superintendent of a major logging operation of the Great Northern Paper Company. His operation includes nine logging camps. Each camp has its own boss, responsible for cutting, hiring, firing, and feeding. All bosses are responsible to the super, who is responsible for everything that goes on.

A camp boss needs be a superlumberjack and the super must be a superboss. At forty-two, Tommy Kelley is all that. Underneath his blue-checked mackinaw is a woolen sweater ornamented by a big blue Y. And believe it or not, underneath the Y is a golden key of Phi Beta Kappa. Tommy is a true instance of the new generation of woodsmen, the forestry school graduate who joins a logging company as a forest engineer and so begins to learn the age-old trade of timber.

Tommy gave us the welcome of the camp. He said the cook had already laid us a hot snack. We propped our elbows on an undecorated table of fancy foods—rare sirloin steaks, hash-brown pota-

toes, white bread, corn bread, and butter rolls; cabbage salad and fruit sauce; fresh green vegetables, spiced ham, and apple tarts; double-story chocolate pies, enormous crisp doughnuts, and giant schooners of black coffee.

Pete Dahl ate and talked of old times while the rest of us merely ate. He said that the fare of a logging camp is the real story of American lumbering, and that he has absorbed all kinds. Paul Bunyan grew up on rough fare and rougher lodging. In the old days brown bread, beans, salt port, and sorghum were logging camp stand-bys; the first two frequently weevily, the pork maggoty, and the sorghum sour. No place for perishable foods in the woods. Fresh meat and vegetables would spoil during the slow tedious haul to camp kitchen; or, if they did not rot they would freeze.

Cooks were bad and quarters worse. Board bunks without mattresses. Dirty blankets, no running water, no laundry, baths, or mirrors. On Sundays a jack could wash out his socks with lye soap and delouse his blankets with kerosene. A man worked from dawn till dark in the woods, then shivered at night on cold bare boards. It was a bitter hard life, but strangely enough men grew to like it. A few old-timers still appear to prefer it.

Nowadays the better logging camps have cold storage which enables cook and cooky (cook's helper) to cram mess lockers with fresh beef and eggs, dressed poultry, butter, and cheese. Now there's cream for the coffee and iced tea with ice in it! And almost without fail there are doughnuts—to the immortal glory of old Bid Byington of the Kennebec. Around the turn of the century old Bid, a tramp cooky, devised and mastered a recipe for sugar doughnuts. Wherever Bid Byington went sugar doughnuts appeared. Logging camps scrambled and fought for Bid's services and crack pollywoggers and drivers quit good camps just to follow the trail of sugar doughnuts. Now that old Bid Byington has kneaded, punched, and fried his way to glory, a logging mess without sugar doughnuts is still lacking in status and stature.

"Tea with blawsted crumpets, doncha know, ole chappy!" The super took up Skipper Willie's chant. "And a scented bawth, with breakfast in bed!"

Then Tommy Kelley topped the chocolate pie with an invitation to come and have a look at the camp. We made the rounds through the twelve clean barracks, each with eight spring cots and real mat-

tresses with clean linen, laundered blankets, and real pillows. He showed us the kitchen, a credit to any city restaurant; the two bath-houses, a cold-storage plant, a laundry, and the recreation hall with its writing tables, magazine shelves, and master radio.

Skipper Willie puffed at his pipe. "God, but the wurreld do change." The super patted his head playfully. "That's right, skipper. But drivin' never changes. And we're drivin' in the morning. We got the bateaus. We got the men. We got the logs."

We loafed away the afternoon and destroyed a heroic supper. I turned in early and smoked cigarettes in the jet-black darkness, listening to the song of the big creeks and to strains of radio music which bulged through the thin shell of barrack wall. Then I heard the splattery cadence of ivory cubes striking a bare floor. I roused when an invisible figure politely lifted all the covers off my feet. Through the window a strip of salmon-pink light marked the east. Big boots were galumphing down the aisle and lanterns were swinging. In the mess hall many lights were burning and some lusty soul was pounding a skillet and yelling, "Slop!"

I slipped into my clothes, laced my boots over an extra pair of wool socks. Skipper Willie had told me that a driver with cold feet is worse than dead. "Dress your dogs and stuff your belly."

Outside the air was wet and ringing cold. But the mess hall was warm and crowded with good smells and hungry men. Overalled cookies were "slingin' around" a colossal breakfast of thick ham steak, eggs scrambled in cream, thick toast drippy with butter, master flapjacks with crisp sausage and real maple syrup. A gaunt, downy-faced youth scooped deep into a platter of ham and favored me with the rest. "Take plenty, podner. After this it's cold slop on the riverbank." He paused while lacerating a stack of flapjacks.

"At a loggin' mess you ain't eatin' off the company. It's all paid for outa wages and chop money. Pay plenty, eat plenty . . . Two or three bucks a day to chop. A buck and a half to eat. So eat plenty!"

Food was vanishing like the wet snow outside. We heard a great sloshing and scraping toward the boat dock. Tom Kelley was standing in the doorway. Underneath his short mackinaw showed splotches and fringes of a blood-red shirt!

The super beamed and raised a wool-mitten hand. "All right, boys! I've lined out the cant hooks in the shed. Make sure your

hook's okay before you take it. We'll carry extra hooks in the boats. You'll find the poles on the floor of the bateaus. I want you young squirts to be careful. This is a dangerous game for a damn fool. Recollect that Pete Dahl is boss of this drivin' detail. Take orders from him. In case we hit a jam let Pete tell you what to do. . . . First we got to skid down the longs on Toole hill. Then we'll open out one poundful of the pulp . . . ”

The gangling, fuzzy youth was getting to his feet. “When will we eat?” There was a roar of applause. Tommy laughed. “Cookees are set to feed on McNeil's point. That's about sixteen miles down-river. We'll do good to make it by dark.”

The fuzzy youth corrected almost tearfully. “Hell, we'll do good to make it by next Tschewsday!”

Skipper Willie appeared in orthodox boots, corduroy, and mackinaw. But he wore an officer's cap with a broken strand of gold braid. He bowed to deafening cheers.

We filed out into the soggy new morning. Each man shouldered a cant hook, a six-foot hickory-handled pole with a loose-set steel catch-pry at the end. We tramped single file up the long whitish hill. First sunrise was rousing the muse of song. The fuzzyface began the old classic of Maggie and her underthings.

They were tattered, they were torn. They were werry badly worn,
Were the red flannel drawers that Maggie wore . . .

We got to the log piles, black mounds of thirty- and forty-foot pines. A work crew had pulled out the big boulders from the hill-side and chopped away the brush for a clearway to the swelling yellow river. The super said there were about 750,000 feet of logs in the piles and about 1,200 cords of pulp waiting in the near pond.

Pete Dahl was leading the attack on the carefully tiered mounds of logs. “Fid from the front, men! Lay 'em straight!” He set his hook to the far end of a four-foot-thicker. Skipper Willie took the other end, slipping his big hook as dexterously as a night nurse slips a hypodermic needle. Two pairs of broad shoulders swung into a quick lift.

The big log eased forward, wallowed in soft slush, began to take the steep incline at a fast role, springing higher and higher into the air, and smacking harder against the snow-soggy earth. Its course

showed a darkening haze of splashing mud and flying bark. Faster and faster until the big one charged over the bank and splashed into the river. Tongues of dirty water shot high, and the big splash echoed and re-echoed down the long channelway.

Timber in water! The big drive was on. Hooks were easing to butts and tips of solid pine. There is no time to waste when loading out a fast drive. Big timber must stay together in the water.

"Loose them big bitches. We got little dawgs to foller 'em!" Eighteen hooks were pairing into action. Wet logs were slashing into the river faster than a man could count. "Pour it to 'em!" Two big logs circled in and smacked together on the steepest grade. Bark and splinters flew like shrapnel and during the moment of collision three or four more big logs piled into the entanglement.

"What the hell chance has the toothpick factories got?" Pete Dahl bellowed. Then the pile-up lunged into the river, with a thunderous brown mountain of a splash.

"Swing them cants!" Log piles were thinning and the skidway was bare of snow. We did our best, charging the hook handles and straining till red splotches played before our eyes.

There was a belligerent roar from up toward the spillway gate. "Hey, Pete, they're turnin' in the pulp wood!"

The nearest back-pond was dirty brown with its crowding burden of cordwood—four-foot toy logs which feed the grinding jaws of pulp and paper factories. The gate was wide open and the brown cavalcade was charging into the main channel.

"Can't the crazy bastards give a man time to get to his boat?" Pete swung his cant hook over his left shoulder and tore down the hillside like twenty-six Biblical Hittites in zealous pursuit of an Israelite. We followed as best we could toward the smudge of a dock where the bateaus were tied.

A bateau is a log driver's own boat—distinctly American despite the name. It is a sturdy hand craft, wood built and from sixteen to twenty feet long. It is sharp beaked like a canoe, though broad centered and taller of waterside. You navigate by means of a long hand pole with which you can dig into the bank or bottom. The poles are ideal for prodding and steering floating logs and the boat is so sturdy that it is not likely to capsize when handled with any reasonable degree of skill.

We piled into the bateaus, deposited hooks and reached for the

poles. Skipper Willie was first to push out into the maelstrom of logs. For a moment he drifted, legs far apart, pole raised to shoulder level. "Punch them big uns center, boys! Straight-end 'em with the current!" The skipper set his pole and charged against a big log that was already crossways to the current. He reminded me, somehow, of Don Quixote in joust with the windmill.

Pete Dahl let me into his boat. The super was rigging out a blue rowboat with a precious assortment of blasting powder, dynamite, caps and fuses, and two coils of cable rope. We watched the slender line of bateaus swing into action. The start was easy—a smooth current which discouraged entanglements. There was no need to bother with the short logs.

"Jest bob along till she jams." The long logs were off for a fast start. I suggested to Pete that we would be caught up with the cookees long before suppertime. Pete only smiled. "Before there we get by that horseshoe bend, she'll jam up—tighter'n the devil's tail's stuck on. Or maybe she'll jam right at William's shallows. Anyway," he added reassuringly, "we got three damn long days before we get to boom."

I admitted my ignorance. "What's the boom?"

Pete grinned. "There we got a dam. There we drive all timber into Dryer's Lake and raft it acrost with Diesel tug into main channels again. That tug she is where old Willie gets the name of skipper. That's when Willie gets to strut his blue sailor cap with gold trimmin's." The pace grew faster as the channel narrowed. The line of bateaus was now far spread. We heard distant bursts of song and far-echoing sallies of wit. Pete smiled again. "Boys damn happy till we clog up. Then they quiet off."

A couple of miles farther the riverway broadened into a yellowish, summer-squash-shaped lake. All bateaus swung close to shore, pushing long logs to center, cudgeling the eddies of pulp. Pete bore hard on his pole and swung us into the thick of the fight. "Watch them longs and don't let 'em sideswipe!"

That was easier said than done. The drift was slowing now. We could see a jam starting down to the right front. Only one boat was near it. "They cut pulp and try to drive pulp when better they should watch the long logs." Pete's tone became one of command. "Look, we got to get close into that jam. D'rectly I jump out. When I do you hold boat!"

He charged the bateau ahead, weaving among the long logs and fighting through the little ones. Skipper Willie manned the boat nearest the jam. He had traded his pole for a long-handled ax and now waited in the keel ready to jump. "You push ahead when she breaks up!"

The skipper cupped his hand to his mouth. "It's only a pin-up. Only one log got to be chopped." Pete was making spluttering noises. "I ain't blind, you snotty gorilla. Nor deaf neither." He handed me the pole and reached for the ax that lay in the bottom of the boat. "Hold 'er!" He jumped free of the bateau, began running across the sodden surface of logs, ax close at his side.

His feet and legs were spry and sure and his big body assumed incongruous grace. He loped on to the front snout of the jam, and there began to swing the long-handled ax. The blade sparkled in musty sunlight, but the spanking reports were muffled by water. Big chips flew high. Pete changed footing and opened a quick series of hard left-hand swings.

Skipper Willie looked on tensely. "Look out, you big palooka!" There was loud popping and a snarling of breaking timber. Pete pushed his ax close to his side and began to trot away. He was in the nick of time. The jam was open now and logs were shooting forward like bullets.

Pete landed two-footed on a turning log and leaped into the bateau. "Tie in with Willie!" he yelled. Skipper Willie held out his pole and began whooping to the other boats. "Let 'em go by!" As we skidded away from the charging stampede of timber Willie gouged Pete playfully.

"I wouldn't be sayin' this if I didn't know you was too dumb to catch on. But that there was one of the best chop-outs I ever see!"

Pete returned the punch. "Says you! . . . Recollect how we use to play around Penobscot Bluff! She'd jam and we'd climb up the banks and the boys would tie a rope around me and lower me over the bluff with a ax. Recollect the time you let go the rope after I'd chopped out a jam, and damn near drowndt me?"

The skipper grinned "Yeah." We drowsed down six miles of smooth channel, the log herds well behaved by natural law. It was easy drifting. But prospects of the inevitable horseshoe bend proved a wet blanket for spirits otherwise gay. We stopped for a

few minutes at the decrepit remains of a log-loading wharf, where Pete, the skipper, and the super held a brief council of war. Then Tommy Kelley rowed ahead with his blanketed cargo of high explosives—enough dynamite to sink a battleship. Pete ordered all bateaus pulled up on a rock ledge about a mile downstream.

"We better walk the bank. Jam will be waiting for us, nohow." The prophecy smacked of assured fatalism. But why not? Pete Dahl had driven this channel every spring for more than a quarter of a century. And the drive had never failed to jam at the horse-shoe. Shallow water, swirl rapids, and outcropping boulders. But one big juicy charge of dynamite placed early enough can open the way.

We poked along. From over a hill came the brazen melody of an army bugle. Skipper Willie said it was another one of them CCC camps, another playground for Mr. Roosevelt's Robin Hoods. He also said that Pete Dahl would fit in nicely as a CCC-er. Pete thought otherwise. "Monkey spit! Them ain't woodsmen. They never get near real timber. Wish they'd stay closer to town. Damn nuisance havin' 'em this near the woods."

He explained for my particular benefit, "Folks in the woods start fires. Fires damage us the worst. Hundert men in the woods start a hundert times as many fires as one man. More people in woods more fires you get."

Pete soliloquized further. "What the hell does government want to plant trees for? Timber's growin' four times faster in Maine woods than it ever gets cut." Skipper Willie added another thought. Logs, he said, were a crop. They need to be harvested when ripe, like any other crop. No real woodsman sees any sense in getting sweet and blubbery and leaving trees to outlive their age of usefulness. Or any real place for the German school of forestry so devotedly accepted by metropolitan New Dealers—the theory that trees should be marked with a serial number, planted from a nursery, and enshrined in red tape.

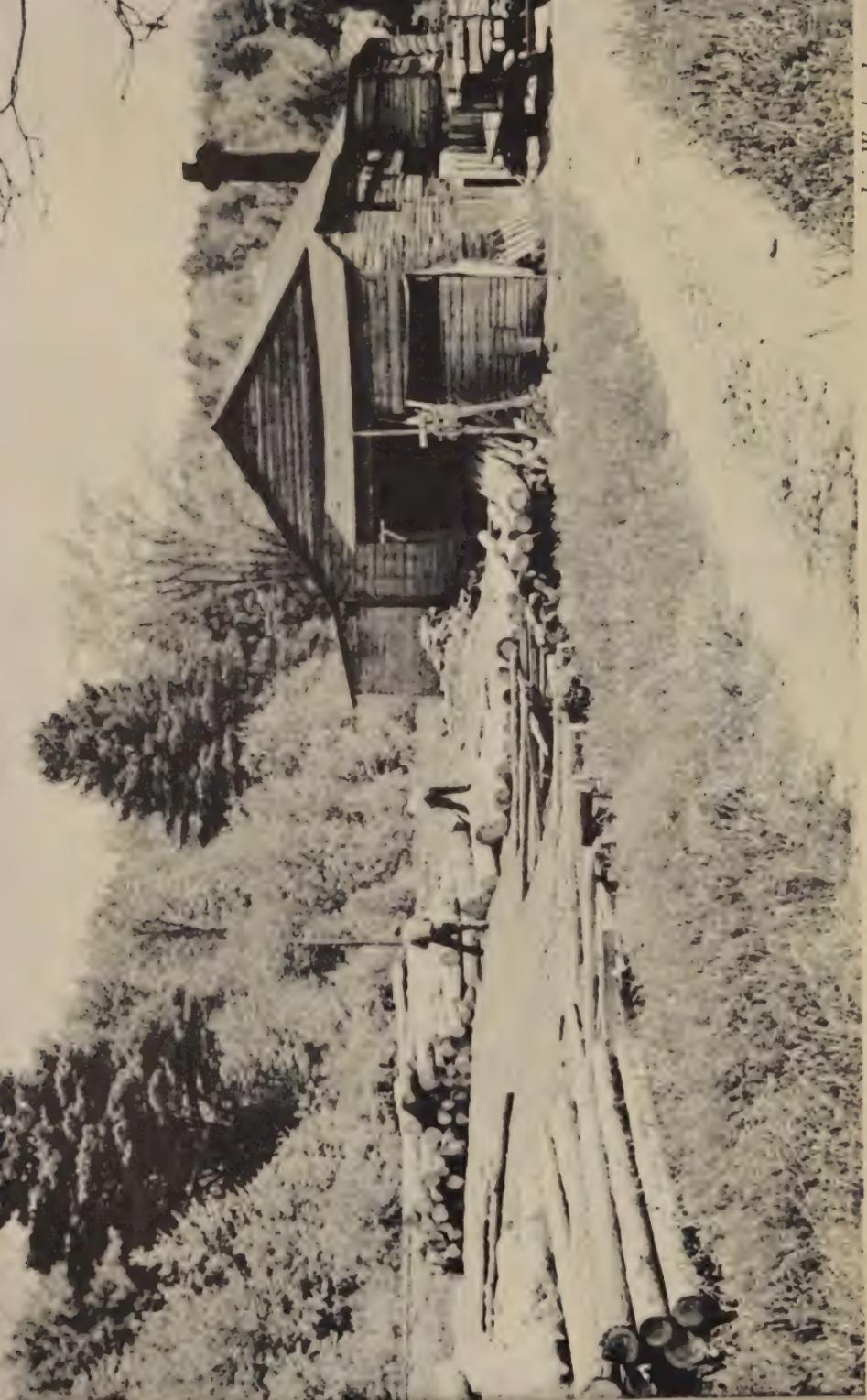
From a commercial standpoint few if any tree-planting ventures have proved a success. Various big outfits have tried it. One of the last planted had raised a prime spruce crop at a minimum overhead of \$15 a cord. When the timber was big enough to cut spruce was worth around \$7 a cord. So the tree planters went bankrupt.

We poled into still water and pulled the bateaus aground, then

George French

CANT HOOK TO LOGS: CLEARING A JAM ON THE SACO





set out for a mile tramp down the slippery bank, each man armed with a cant hook. The big jam was well started. Pond waters bulged with low-swimming logs. The super pushed his rowboat within an easy quarter mile of the channel point. Pete and the skipper hurried ahead to help him load the blast. We saw them stroll out over a dark wet acre of logs, each with a wax-paper package on his shoulder.

"Ever when she blows, ever' men gets to logs!"

The blast was a hard one to set. We saw Pete poking gray-paper sticks into a rubber bag. He tamped the cap between his teeth and tied up the cord. The super was laying a long white fuse. We saw him reaching for his match kit. "Step out, men, and ride them saplin's!" The crew hoisted hooks and got into action, every jack of them a log skipper—except me. On the second hop I went into ice water up to my waist, then backtracked to the bank as demurely as possible.

The others were set to "fig." The blasters were backing out fast. Then the dynamite struck with a dull jolting boom. A frantic mix-up of long logs appeared to be rising straight into the air. Then a great dirty funnel of water shot skyward, blotting away the leaping timber.

Logs were piling through now—too fast for safety—smashing and smacking against protruding rocks. Drivers were scattered over the great floating stage, superlative hook jugglers, prodding logs and skipping logs. Dervishes of the slime. A grand ballet of big boots that were not wet. Long logs were straightening and pulp shaped a brownish back-draw. But night was settling before the last of the timber rounded the bend.

Down at the point, cook fires tossed in fog and mildewed canvas marked the outdoor kitchen. We tied up the boats again and lined up to eat. It was cold enough to start hands and feet aching. But there were welcoming fires and a dry table. Two fat cookees were ladling out hot moppers of stew, clean savory beef swimming in agreeable pools of chowder with noodles. "Sling out the slime!" The third cookee was passing around paper cartons of sweet rolls, well buttered and piping hot. After that came steamy black coffee. We ate our fill and when the fare had been destroyed, Skipper Willie yelled for attention.

"Ever'body jest lay around and act stupid—like you was in Con-

gress! The motion now pendin' the house is are we goin' to burrow into this cold mud for the night, or do we push on till we get to Plower's Ho-tel. That's nine miles down and all smooth water."

"What kinda girls they got at Plower's?" asked the tall fuzzy-faced youth.

"Boo-tiful," said Skipper Willie. "The youngest will be a hundert and two Tschewsday." The super cut in. "No girls and no monkey business!"

The fuzzyface pretended deep disappointment. "Don't we even get to baptize the preacher in rum?"

"You get to skippin' logs at five sharp tomorrow morning. In case you get in jail you get left. Otherwise I don't give a damn what you do."

Skipper Willie squatted before the fire, redonning his gray mittens. "In the old days we used to wreck them joints every drivin' time. Once we bought three hogshead of real Jamaica rum and throwed a quart cupful on everybody that walked down the street. That was the time we sunk the preacher in the last barrel."

Pete nodded glumly. The firelight made strange traceries about his lips. For the moment he seemed to have lost both youth and age, to be merely a shade from a storybook. "Yeah, those was the days when river drivers ruled the roost. Crazy boys. Crazy damn fools—all of us. Those days is gone now. A driver is nothin' but another driver. Yust as well. Yeah." For the moment Pete seemed extremely sad. "Three more drives after this one, and I quit. I get my farm."

Skipper Willie showed tender concern. "A hell of a farmer you'll make! What you aim to raise?"

"Mink and foxes for fur, I expect. Maybe only a garden and apple grove . . ."

Skipper Willie blew his nose with a clarion snort. "Had you ever thought of raisin' beavers? They breed fast as rabbits, and you don't have to feed 'em nothin'. They live on the nurture in wood."

The fuzzyface showed real interest. "Hey, skipper, what's a nurture?"

Log driving is an old saga of timbering which lustily declines to change. But the more general story of American wood is changing with meteoric speed.

Cable-driven hoist drums capable of a fifty-ton straight lift . . . caterpillar tractors to replace horses. . . . Overhead, electrically operated log carriages, automatic log skidders, giant Diesel-driven logging trucks with power-operated hoists.

These are some of the headliners among new forestry mechanics which are serving to change the American woodcutter to a forest technician.

Paul Bunyan was pictured as the superman who singlehanded mowed down forests, scooped out lakes, dug river channels, and snapped off giant trees as if they were toothpicks. Nowadays the feats of Paul Bunyan are changing from folklore to fact. Today a lone woodsman can literally fell a forest giant and drag it to market. But his power is not superhuman or fabulous. Rather, it is the result of rapid and ingenious growth of mechanical equipment.

The tractor is actually the basis of the new age of American forestry known as "selective logging," upon which timber conservation now depends most heavily. In the former steam and horse era of long-log operation "universal logging" was standard practice. This meant destruction of all trees in the woods. For the earlier school of logging required heavy expenditures for building roads, establishing narrow-gauge or other steam railroad facilities, for locating forest camps for a single chop. The result was that overhead expenses became so high that logging companies were usually obliged to cut all timber within a given area.

Besides wiping out millions of acres of our best forests, universal logging showed other serious faults. Its use of steam railways with wood-burning locomotives and its practice of quartering great numbers of workmen in coniferous woods caused an increase in forest fire losses from a few thousand acres a year to a high of 33,000,000 acres. But today modern fire-prevention methods, including fire lanes, towers, and airplane patrol, have succeeded in cutting losses from forest fires to half the latter figure.

This is one reason why we find that over the nation as a whole healthy, protected trees are now growing more rapidly than timber is being used. A still more effective reason for this is that new styles in truck and tractor logging, with modern mechanical accessories, have outdated the earlier practice of "clean-off cutting" or removal of all timber. With the efficient new equipment logging operators can afford to go into a given forest area and take out

only the particular type of timber desired for a given market, leaving the rest as a permanent resource.

Let's call him Paul Bunyan, after his great prototype in our American mythology; Paul is typical of the real pollywogs who drop and top trees. Now pollywogging along Maine's great Allagash, Paul has jacked and bulled in Maine woods for nineteen years. He is forty-one. His father, also a lumberjack, was a Swede. His mother was the daughter of a Maine farmer who catered to the logging trade.

Paul went into the woods when he was sixteen as cookee for a logging camp. From that job he became a bushwhacker—a low-paid day laborer who clears roads or trails to chopping locations. At twenty-two, when he measured six feet and tipped the scales at around two hundred, Paul became a full-fledged lumberjack.

His worldly belongings include a good outfit of winter clothes and boots, an open-blade razor which he uses about twice a month, a short-ax, and an all-metal bucksaw. During the fall chopping season he customarily buys and consumes about six quarts of rum (all hard liquor is "rum" to a Maine woodsman), drinks comparatively little during the remainder of the year. After spring drives are finished he spends about two weeks in Bangor, boards with a "madam" and helps entertain at least one girl.

He is moderately profane, reads pulp magazines and occasional newspapers laboriously, deposits from \$200 to \$300 a year in a savings bank, plans to retire at fifty and to marry after retirement. He expects to take over his grandfather's farm at that time.

As a rule Paul signs in a logging camp early in October, draws ax and bucksaw, and goes to work. The big chopping lasts for about a hundred days, or until the snow becomes too deep for efficient operation. A good man can drop, top, and saw about two cords of four-foot pulpwood, or its equivalent in long logs, in a dawn-till-dark day. For this he is paid from \$2 to \$2.50 a cord, less subsistence at camp. Paul Bunyan's winter chop averages 200 cords for wages ranging from \$400 to \$450.

He believes "short logging," or pulpwood cutting, a better job than long logging. He prefers to work alone with his ax, bucksaw and "spud," and a cant hook (which he calls cant-tuck). When

chopping is finished a lumberjack can den up in his camp, loaf in town, or work in the mills until spring thaws and driving time.

Provided, of course, the work holds. That is the first doubt and bluest note in the perennial symphony of big woods. Great paper and wood novelties companies sometimes let their cutting to private contractors, who usually operate on small capital in anticipation of frequent advances of money. Sometimes the contractors build logging camps, open trails, shape skids and spillways, and slash great timber. Then prices may run amuck, or markets go suddenly haywire. Camps, roads, equipment, and logs are abandoned. Camp houses rot. Tools rust.

Paul Bunyan is largely lacking in sentimentality toward trees—the “only-God-makes-trees” attitude. Like most of his kind he is highly intolerant of the now dominant German school of forestry (so fervently adopted by the Roosevelt administration) which would cipher, inscribe, and autograph every tree and cherish the bulk of forest trees beyond their age of greatest usefulness. Paul sees nothing sacrilegious about felling trees. He believes it an honorable and necessary work to “cut when the time and timber is ripe.” Trees, after all, are a crop, and a perishable crop.

Like the great majority of professional woodsmen, Paul relies implicitly on the ability of trees to replace themselves. But he fears the markets for wood. He does not question its supply and the perpetuation of trees. Next to man-juggled markets and jobs, forest fire is his greatest fear. It, too, threatens his life and destroys his work. It, too, is beyond a good woodsman’s power to control. But he continues to take his circle of years by easy stride. He revels in his own strength and skill. He is a good logger, and proud of it.

About half of the million Americans who earn their living from forests and woods are part-time or most-of-the-time farmers. Their ranks include numerous great skills of rural America—and timber claims a place of ever-growing importance in country security. For one thing, tight cooperage is back. Beer flows at every lane and crossroads, and what is still more important commercially, so does legitimate whisky. Old bourbons trickle from old casks and barrels, as a great spirits-consuming nation rouses from its foggy and sometimes nightmarish dream of Prohibition.

Herein lies a story, a picturesque American saga—the romance

of staves. Staves must build barrels and clean-bodied oak trees must give staves. Axes must split them from logs and batteries of machines must change the ax-wrought sticks into stolid casks, kegs, and barrels to store and vend anew the products of a great and old industry. Tight cooperage is essentially a primitive trade inasmuch as its basic materials must be supplied by sharp axes guided by a skill obtainable only from a lifetime of axmanship. And it is primitive, too, from a standpoint of selection and transportation. Better than 50 per cent of the highest grade stave timber is now started to market via human backs. Reasons for this back-toting are botanical and geographic, as well as financial. They start from the fact that all sorts of liquormakers are still insisting that their wood cooperage be of white oak.

In most parts of the country, white oak has become a rare timber. Once the principal hardwood of the Middle East, West, and South, it has been ruthlessly slashed and, owing to its eccentric seeding habits, has generally gone the way of the dodo.

So the remaining source of white oak is shifted to the far-back hinterlands, particularly the southern mountains, the western foot-hill Appalachians, and into the Ozarks of South Missouri and North Arkansas. In these back hills, white oak has made a last stand, but even so the easily reachable tracts were long ago cut away and sold. This means that stave timber must come out of rough country; from lost valleys and roadless shelf lands; from lowlands frequently flooded by riotous mountain rivers; from hillsides and gorges that are lost to the modern world.

At any rate, the dash for the surviving white oak has done its part toward checking the prevailing wail that men, land, and trees have been put on the auction block without bidders. There are more than plenty bids for stave timbers, for lands that grow it, and for men who know its habits.

The revival of legal beer found only about a hundred stave mills in running condition. The start of the new year finds more than 1,200 in action, many of them running day and night; plenty of them lighted by lanterns in place of electricity. It takes 15,000 medium-sized staves to fill a freight car, and any donkey-engine stave mill should be able to turn out two carloads a week, provided it can lure in the timber. In earlier and better forested years, it was the custom for mill operators to locate on unbothered tracts of

timber, lease or buy the land, locate the stave mill and so exploit the timber.

But this practice no longer holds. Now the stave mill must be set up as far back in the hills and brush as it can be, yet stay within reach of passable highways and backwoods axmen who must bring home the bacon in the form of white-oak splits.

I learned about stavemaking and tight cooperage from Dave Kezzler, a first citizen of Hemmed-in Holler, Arkansas. Hemmed-in Holler is a valley about the size of Manhattan Island, blocked off by a riotous mountain river and walled by a circling of bluffs and ledges steep enough to give heart flurries to a mountain goat.

Hemmed-in Holler is a last stronghold of virgin white oak. Dave Kezzler learned the stave-cutting trade in the forests of old Austria over forty years ago. He came to America with high hopes and a bagful of broadaxes. Then the war broke out, and Dave declined to go forth and shoot the tar out of his relations back home. So he struck out for the lost world of Hemmed-in Holler, and adopted the name David Kezzler, by kind permission of two near-by promontories known as Mount David and Mount Kezzler.

Dave married into a good mountain family, whetted up his axes, and began cutting whisky staves—that is, staves for whisky barrels—for export to the British Isles. He would roll his logs down into the valley, hew out the staves, store them until he got a raftload, then at high-water time he would build a raft on the local river and so float them down inland riverways to a loading dock at the mouth of the Mississippi.

Of course, there were professional drawbacks. Sometimes the rivers would not rise enough, and sometimes they would rise too much and spill his cargoes. But Dave Kezzler appreciates the fact that you cannot live at a cosmopolitan crossroads and still have first-growth white oak.

Then 1933 brought beer. Dave Kezzler sharpened his axes, and went back to work. True, it was a little mortifying at first for a whisky-stave man to turn to beer staves. Dave, like most of his neighbors, defines beer as a weak bellywash for the idle rich. But now with the return of real whiskies, wines, brandies, or what will you, a new drama of oak begins to flourish.

So hardwood cooperage is coming back, and white-oak stave

mills are reappearing at every propitious turn of the back-hill trail. Master axmen, and timber graders, and stave lathers, whose productive talents had been spurned for fifteen years, are back on the job. Southern hills stir with timbermen and buyers. Glisteningly sharp axes bite again into solid heart oak, log wagons rumble along unbelievably rough forest trails, and lanky hill men carry heavy logs. Horses and mules strain at log carts. Donkey engines, rusty and old perhaps, whirl flywheels and lathes at far-back cross-roads, and trucks boiling and rumbling under their burdens of white oak splatter mud and dust and pound the life out of wandering hill roads.

America is wet.

Dave Kezzler testifies that the staving trade has plenty of sleights and turns and back-draws. Given a man with an ax, plus a craving to earn a snatch of good money by honest work, the man goes out and locates a good, straight-grained white oak tree. It must be at least eighteen inches in diameter, preferably bigger. It should be at least seventy-five years old, preferably older. Maybe it is on his own land; maybe not. If it is only a matter of one tree, or two or three trees, then land ownership probably makes no great difference—anyhow not in this surviving frontier.

The axman fells the white oak and chops it into “split” lengths of about thirty inches. He may, of course, saw it, but back in the real hill country saws are still looked on as being a little sissy. So the chances are that he chops it—straight edge to the left, chip cut to the right.

There is the chunk cut and ready to be split. The splitting is the crucial part. First the sap part must be peeled down to heartwood. Then the log must be measured accurately, by either eye or pocket rule, and split up like a restaurant pie. Each stave split must be at least four inches in depth and two inches thick on its thin edge. If the heartwood is big enough, its mid-parts can be salvaged for another series of splits.

This sounds fairly easy. But the splitting takes a real axman, with weather eyes and a good steady hand.

Dave Kezzler has noticed through the course of a great many years that stave buyers can spot flaws in timber quicker than a taxi driver can spot plugged quarters. Nothing off-standard, from an obvious crack to a speck the size of a pinhead, gets past them.

Frequently in the healthiest of trees one fiber may be dead, and so leave a black line. This can never hold spirits or get past a stave buyer. For the finished barrel must be gastight as well as airtight.

Dave Kezzler, who happens to be something of a skeptic, takes his time, picks the best timber, hopes for good prices and expects bad. His only abstract worries take root from the fact that unless somebody can find a substitute for white oak the trade cannot go on forever. Assured that his trade is booked to become perhaps a billion-dollar industry almost overnight, Dave just puffs at his pipe and gets back to tangibles, such as the character and worth of one particular tree.

He showed me where he had felled one white oak which, turned to stave, netted him an even \$240. Needless to say, this was an exceptional tree. He has chopped into plenty of others which, owing to peculiar grain or faulty innards, yielded him nothing but a tired back and arms, a dulled ax, and a great deal of wasted time. A \$15 to \$20 tree represents a good average, and \$1 to \$3 trees are altogether too frequent for honest country ax wielders to turn high financiers.

The beginning stages of tight cooperage remain in the catalogue of plain and primitive crafts. Shoulders, backs, and hand axes must do the fundamental labor. Vast machines and factories may finish the deal, but from first to last the trade is one of personal enterprise and clear vision and of rigorously guarded quality. A colorful trade and an old one, it now rouses to the task of rebuilding and carrying forward a fine craft.

More numerous from a census standpoint, and of vastly greater significance economically, are the "piddlers," or "peckerwoods," rural people engaged in miscellaneous occupations of the woods.

Bill Plue, typical of the piddlers, is eighty-nine. He has lived to see virgin forests of white oak replaced by red oak, which in turn have given way to jungles of hybrid saplings. He has watched valley sweet gum grow to the thickness of a wagon wheel, and since his beginning days at timbering scrawny young birches have acquired twice the thickness of a man's body.

Old Bill took part in the last of his neighborhood's great log rollings. He was one of the score of young men about Brush Creek

who seventy-three years ago, in a spirit of openhearted neighborliness, banded together and cleared twenty-five acres of prime walnut timber, for the betterment of Newt Wilcox, a countryside cripple, who desired cleared ground sufficient to last out the needs of an infirm old age. So the men of Brush Creek community chopped the timber, cleared hundreds upon hundreds of the great body logs of walnut, piled the limb wood in a mountainous stack for burning, and rolled the logs into a great windrow, there to be consumed by a mighty three-day fire.

The following year introduced the first open market for native walnut timber. Then the citizenry of Brush Creek learned that in their charity they had put to ashes no less than \$20,000 worth of prime walnut timber. The cripple heard but he could never believe and so died happy at the scope of the clearing.

Bill Plue was born in the timber and he expects to die there. He grew to maturity knowing little of the ways of man toward man. One summer an herb doctor came into the countryside, a practitioner innocent of degrees or licenses but possessed of a profuse beard and a strongly medicinal breath. Bill worked most of three years for the strange old renegade, digging medicinal roots, cutting plant tops for tonics and plasters, and skinning tree barks used in the making of homely remedies.

Then the herb doctor vanished and Bill Plue, once more put to his own devices for making a living, turned to baskets and roof boards. For making the boards he picked straight-grained, smooth-bodied red oaks, and chopping their bodies into yard lengths he rolled the chunks to a pronged stand and with a broad-bladed hand ax split them into clapboards, and sold the clapboards to country people who built roofs of them. For making the baskets, Bill used strips of sap bark of post oak and shaped handles and braces from freshly cut hickory.

Yet baskets brought him his first taking of domestic romance. One morning he had loaded a round dozen of them on his shoulder and set forth toward Red Star, reckoning to peddle. He stopped first at the village store. There Merchant Mullinix gave appraising notice to his wares and offered him \$2 in trade for the lot. Bill was just at the point of accepting when he remembered that making the lot had involved seven hard weeks of labor. So he declined with a turn of nonchalance and set out to peddle.

But small change was scarce and the hill wives were in no mood to buy.

The next year saw the coming of the railroad—which created a market for tens of thousands of white-oak crossties. So Bill turned tiecutter, felled young white oaks by the regal score, and hewed them to ties destined to underlay winding miles of steel rails. Working from dawn to sunrise Bill could generally clear three ties and sometimes, when the breaks were with him, four. Forty-seven cents apiece the ties brought, and nine cents more for hauling. And the market held through seven prospering years.

The tie market waned, then died. Five lean years Old Bill spent at chopping cordwood for Tam's lime kiln. Then a hardwood lumber mill located at Red Star and he took a job as grader, and so wandered through far turnings of hills, spotting and sorting and measuring oak timber. The first mill died, a new one rose and died, and a third worked the same location.

Bill has stayed a grader through the better part of half a century, albeit the hardwood trade has changed no less than a dozen times.

Now Old Bill Plue is an old man among old men a generation his junior. Not all the days are kind to him. Agues and internal rumblings come upon him sometimes. His teeth have rotted away. There are intervals of weeks when, incapacitated for labor, he can only sit and whittle and daydream.

The hope of a happier and more plenteous rural life for our country is heavily dependent on the major rural resource of timber, valuable as a defense against erosion and soil exhaustion, a boon to water conservation and climate control; a life necessity and essential resource of America beyond corporate limits. Obviously timber values to rural America are to be estimated in terms of the nation's ability to use timber and timber products.

The greatest housing shortage in American history, estimated as at least 1,300,000 dwellings, begins to draw curtains for a new social challenge—perhaps a new age of wood. Part of the show is the workaday drama of industrial research—chemistry, physics, engineering, architecture, trading and selling. Sets and backgrounds are as varied as the country itself. Plot motif features a nation-wide, sometimes desperate, need for houses; better houses for less money.

The show's overture features new styles in flotsam palaces or

better homes from the assembly line. Aided by several manufacturers, the United States Forest Products Laboratory at Madison, Wisconsin, has developed a type of factory-made house, prefabricated from the assembly line, built largely of plywood, wood fibers, plastics, and scrap wood. Five workmen in three days can assemble the house complete and ready for occupancy. Cost of the completed house is about \$500 a room—about one-half that of home construction at the present time.

The great problem in slum clearance is that of finding a way to replace the slums with low-cost housing that is durable, livable, and comparatively fireproof. Costly buildings merely raise rents beyond the buying power of poor people and force them to move from one slum to another.

The Indiana State Planning Board and the Department of Housing Research of Purdue University (directed by Frank Watson) have recently completed an experimental slum-riddance building in Indianapolis. It is a prefabricated house, a two-family dwelling, all wood except for windows, hardware, and twenty-seven pounds of structural iron used for wall braces. Factory-made, the house was assembled complete by four workmen in six hours for a total labor cost of \$52. The building is modern (except for hot water) conforms with city fire, sanitary, and building codes, provides three bedrooms, a living room, and a kitchen-bath for each family, an enclosed lawn, a flat roof for use as washroom and playroom. Total cost for the two-family house is \$1,338.97, or \$669.48 per family unit—perhaps an all-time low for modern housing. The prescribed rental is \$7 per family per month. At present inexpensive housing faces two outstanding possibilities: factory-made structures which can offer the home builder production economy comparable to that offered by assembly-line tactics of the automobile industry; valid use for less costly woods, particularly for small logs, mill wastes, sawdust and scraps, and building products which may be recovered from them. Thus wood becomes more and more evidently a farm crop that is both harvestable and marketable.

From a standpoint of initial cost wood has long been the cheapest building material. Its three great faults are fire hazards, swelling and shrinking, and decay. The decay factor is being overcome by improved paints, better choice of timber, weatherproofing strategic joints, substitution of weatherproof glue for exposed nails (principal

cause of wood-cell decay). Highly promising results are being obtained in shrinkproofing. New glues are being developed which contract and expand proportionately to the woods upon which they are used. Saline baths also are serving to reduce shrinkage.

But the newest and most spectacular finding is the Sherard-Holton formula by means of which wood surface is saturated with a phenol-formaldehyde solution similar to that used for bakelite. Inside the wood this solution is converted by heat to resin and as such closes all water and air passages, which makes swelling, shrinking, and decay equally impossible.

Still too expensive for use in home building, this process is now used in manufacture of such articles as wooden shoe lasts and golf clubs. Present cost of the processing is about forty cents a board foot, too expensive for general use, yet usable for exposed sills and "strategic" joints.

American woods also swing into a fabulous age of plastics. True, the word "plastic" has been worked until it almost hurts to see it or hear it. Yet ours is a plastic age—in the sense of materials which are malleable to the touch and highly synthetic. Every year "plastic" gains factual as well as figurative importance. When the Baekelands stumbled on the famed principle of making a resin plastic by pressing two common chemicals—phenol and formaldehyde—they produced bakelite and started plastics on the glory road of industry.

Today we are plunging into this new era of wood plastics, which seems to show the world's longest front of industrial possibilities. These seem to gravitate toward a substance called lignin. Lignin is the natural cement which gives stiffness to trees and plants. It makes up from a fifth to a third of all wood substances. We also know that "eating out" the lignin from wood pulps not only is the biggest cost item in the manufacture of paper, but is the direct cause of wasting at least 15,000,000 tons of wood materials a year.

Lignin seems to be nature's own plastic material. When hydrolyzed it becomes a powder which can be pressed into rocklike sheets of building materials, or molded or lathed into a black plastic closely similar to bakelite, at production costs ranging from one to five cents a pound—from a tenth to a fifth as much as most synthetic plastics now cost. Wood veneers, various metals, even wallpapers,

can be pressed into the plastic so that they become a permanent part of the material.

Lignin is a natural bedfellow of cellulose, which is not only king of the papers, but the greatest source of plastic products now on the market. From wood pulp treated with acetic acid come such plastic goods as pocket combs, fountain pens, sunglasses, lipstick casings, beads, imitation jewelry, ornamental coverings of various sorts. This also produces the "dry-spinning" process for making rayon cloth. The acetate solution is pressed through small holes and when the solvent is evaporated there remain the fine threads of cellulose ready to be woven into cloth. But the greatest source of wood fabrics is now the viscose process which produces rayons, imitation linens, and several types of cellophane.

The celluloid process of recovery from wood includes literally hundreds of nitrated products, from imitation leather, carpet and rug materials, and surgical absorbents to paints, varnishes, and explosives.

American genius of test tube and workshop supplements the American odyssey of ax and saw. And the host of new wonders in wood uses merge, or promise to merge, into a common line of efficient production. That is the really important chapter in the new and unending story of wood. It has kept and may long keep timber as the productive work of millions of Americans. It may save from collapse and restore to new life thousands of rural communities wherein land might otherwise abandon men.

Though trees are a crop, and our greatest crop, we have no basis for appraising forest resources in terms of annual crops, such as wheat, cotton, and corn. Consumption of wood and timber products is more variable and problematic than consumption of a great harvest of some staple food. Many timber authorities agree that the best appraisal of timber values is capacity of the forest for giving employment.

The National Resources Board suggests that employment possibilities of our timber resources should be divided in terms of man power required (1) for the continuing long-time job of maintenance and management and (2) for the initial temporary job of repair and development. The board estimates the long-term requirements at approximately 750,000 workers employed an average of

six months per year. Of these about 660,000 would be employed in nonfarm woodlands, 40,000 in parks, and a similar number in state and national forest reserves.

The board has presented some enormous though interesting figures on United States land surfaces. It points out that the total land area of the United States, exclusive of possessions, is about 1,903,000,000 acres of which 41,000,000 acres is urban land and rights of way, leaving 1,862,000,000 acres of rural land. "The outlook is that about 952 million acres will continue in farms (including 124 million acres of farm woodland), 491 million acres of forests not in farms, and 419 million acres in non-farm, non-forest lands. (The latter comprises 329 million acres of grass and shrub land, 47 million acres of desert and semi-desert, 20 million acres of rocks and barren land, 15 million acres of swamps and tidal marshes, a million acres of beaches and dune and seven million acres in parks and monuments.)"

The board believes that at least two-thirds of all timberland is in poor condition, with depleted wildlife resources and recreational values seriously impaired by years of neglect and abuse. E. A. Foster, Division of Land Planning, United States Forest Service, inserts the comment: "Quantitatively, however, the total acreage in timber is so great that it would be unnecessary, under ideal management, to devote large areas exclusive to timber production. It would be the aim, instead, to make them serve the combined purposes of timber and wild life production, recreation and other uses. Management would include the establishment and maintenance of plant species valuable for wild life food and cover and for aesthetic values as well as commercial timber, and the development of small lakes and streams, and wild life management."

Depending upon local, state, and regional consideration, the National Resources Board recommends three 'intensities' of forest management—"intensive," "extensive," and "protective." As an average figure the board estimates that, after initial development work was completed, one half-time worker would be required for maintaining and caring for 500 acres of forest intensively managed, 1,000 acres extensively managed, and 10,000 acres under protective management. On this basis a total of 659,000 men would be needed for half-time work in maintenance and care of timber resources.

According to the Land Planning Division of the United States

Forestry Service, "The restoration and initial development of forests would involve planting, thinning, fire hazard reduction, stream and lake improvement, wild life restoration on the land to be used for forestry, including the submarginal farms acquired for forest use. The average number of acres per half-year employment per man for such restoration work, according to degree of intensity of forest management, is estimated as follows:

Intensive	150 acres
Extensive	3,000 acres
Protective	10,000 acres"

Obviously a premium harvest of wishful thinking has entered into these suggestions. But the truth is undeniable that maintenance and supervision of our two-thirds of a billion acres of forests and woods justify both economically and socially the part-time employment of at least three-quarter million Americans, most of them rural. Herein lies the possibilities of a wondrous antidote for rural poverty. The number of forest workers regularly employed by the federal government and our respective states totals around 80,000. However, the enrollment and supervisory personnel of the Civilian Conservation Corps, plus all others employed with federal work relief funds for emergency forestry work, recently reached a total of more than 700,000, and even in 1940 is about 600,000.

There is little likelihood that forest conservation programs as recommended by the Planning Board are soon to be put into effect by local or state government, or by national government. But there is a continued increase in thinking, talking, and planning of forest conservation which will almost certainly crystallize into substantial increase in government employment for forest tending. More than half of all nonfarm lands of the country (about 450,000,000 acres) are now owned by federal or state government). It is likely that competent management of government-owned forests could solvently provide employment for not less than half a million rural Americans—these, of course, in addition to the million or more citizens regularly employed by timber. For trees are the great sustainers of land and of men. And today forest boughs are perhaps the most trustworthy of all natural cushions to offset the blows and jouncings of a continuing rural poverty.

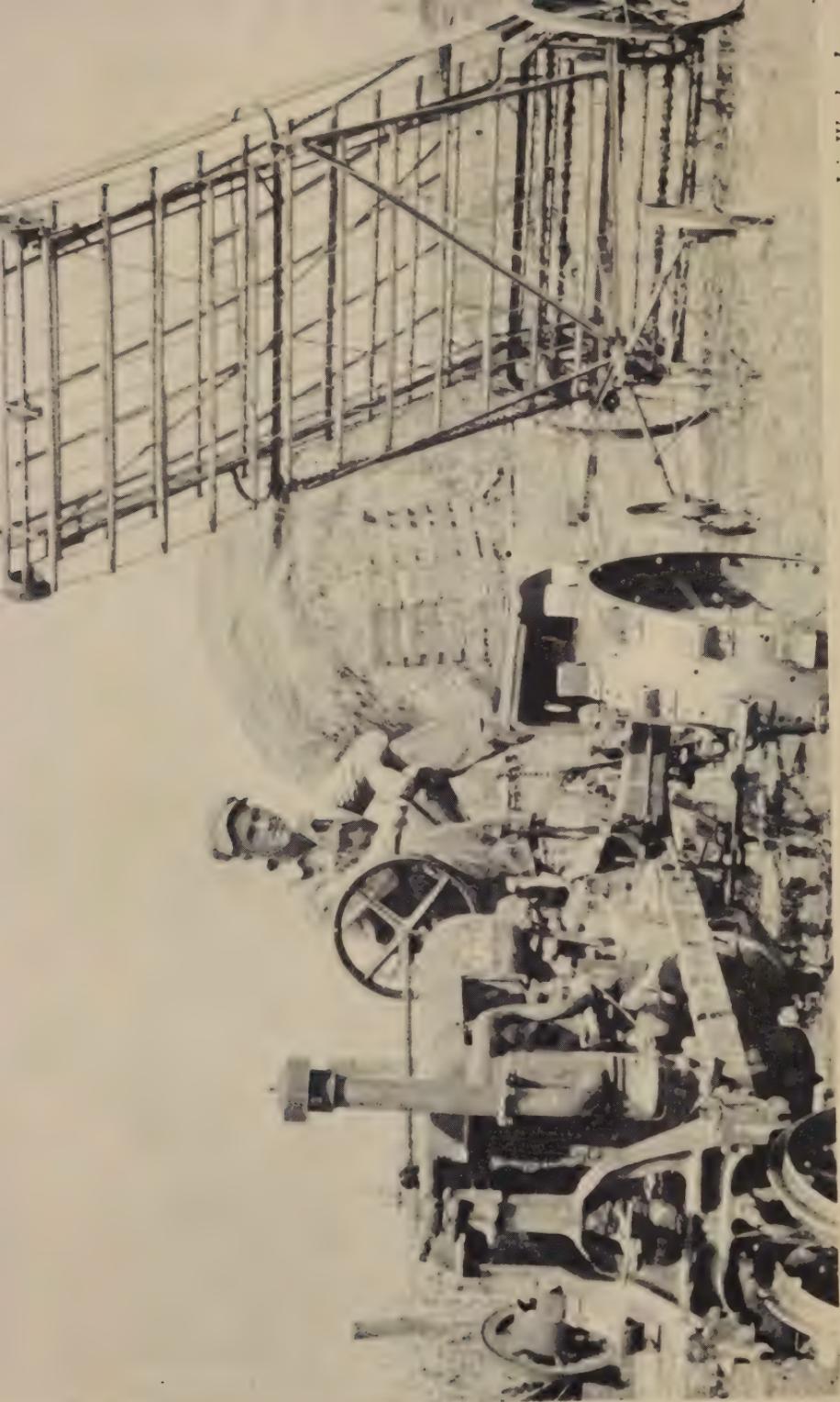
Iris Woolcock

OPEN STACKS WAIT AS FEED RESERVOIRS AT VARIOUS PLACES ON THE RANCH



Iris Woolcock

THE MODERN RANCH USES THE LATEST IN FARM MACHINERY



10

BEEF

BEEF was the basic staple of our first and literal frontiers. And beef happens to be one major harvest of first frontiers which has become adapted to the ways of a comparatively mature America. It is a tangible and reasonably typical link between bold pioneering and deliberate establishment. The story of beef is a study in perpetuation of work, a chronicle of dust and uproar, of borderlands now part of a nation no longer young. It is a work of renaissance. And it epitomizes rather pertinently the rural American capacity for adaptation to fast-shifting times.

Back in 1865 Con Kohrs opened a ranch near Deer Lodge, Montana—26,000 acres of barren mountains and broad mesas a mile and more above sea level. Today Con Kohrs's grandson, Con Kohrs Warren, manages the same homestead, shorn to about 6,000 acres. During these seventy-two years there have been many changes in the status of American ranching. Great ranges have faded, great herds have tramped the glory road, and parts of Montana herself have drifted away in the form of dust. But the clan of Kohrs has stayed. Con Warren typifies the new school of unfenced Montana just as Con Kohrs typified the old. Each is a link in a chain of natural-born livestock men.

In Con Kohrs's day cattle operators assembled herds in the vast ownerless spaces, and there prospered from free grass and water. In a sense, theirs was enterprise via the stiff arm and the six-shooter. Grass waited in uncounted millions of acres; bluestem, buffalo grass, and prairie hay in fanciful abundance. Stockmen pooled personnel and capital, moved free-lance herds over vast graze circuits, guiding them always to greener pastures. These frontiers-

men flourished by way of grandiloquent opportunism, developed unknown brands to famed trade-marks, built the greatest pastoral dynasties of this nation.

But the cattlemen of today must be farmers as well as ranchers; cattle breeders as well as cattle grazers. They must grow much of the grass and grain that make the meat. They must translate haystacks into steers. The old-timers weren't bothered with the trivialities of agriculture. Like the moderns, they had to be accurate judges of cattle from the butcher's standpoint, know grass values and when and how to move herds. Herd motion was actually their most costly necessity. When winter-lean herds became trapped in spring-time blizzards, losses were enormous. River crossings were another great source of loss, drowning not only cattle but many a poor and unsung herder. Without storage of hay or grain, the old-timers had little protection from unmerciful winters. Con Kohrs used to direct his herders to kill off the leaner stock first, boil the beef with barley, make a sort of porridge to feed to surviving cattle. Thus he saved thousands of head during ruinous droughts and blizzards.

In those days there were wolves, coyotes, thieves, and mischievous Indians to be considered. There were mavericks and strays and some rustling. A page from Con Kohrs's 1884 yearbook, written in his prim scroll, shows:

No. of cattle as shown by the books	19,226
less small lot in Judith basin	47
estimated loss on road last summer	50
butchered at Fort and at ranch	68
last year calves killed by wolves	128
losses during winter	750
killed by Indians	1,300

But fighting off wolves and Indians in the nineteenth century was vastly less baffling than fighting off dust and drought today. The Indians, even in frontier days, were limited as to numbers and capacity to maraud and, as a matter of history, the great majority of Indians were good Indians. Their menace has been grotesquely exaggerated, but there is no way to exaggerate the power and remorselessness of a great drought or the effects of a vanished range. The frontiersmen could defend their holdings with com-

paratively simple firearms and with fists and iron guts and whalebone ribs. The new school of cattlemen must equip itself with dependable credit, scientific feeding and breeding of livestock, and the eternal wheedling of politicians. It must face—not the coyote but the truth that there is no longer enough land, grass, and water to go around.

The first Con Kohrs was an immigrant. Born in 1835 in Wewelsfleth, a fishing village of Holstein, he arrived in the United States just as the Civil War was becoming a gory reality. He headed west, hired out as teamster for a wagon train on the Oregon Trail, left it at Laramie, turned north into Montana, stumbled on the Gold Creek rush, and opened a butchershop catering to miners. He swapped beef for gold dust, built up credit and trade in various Montana camps, rode horseback from Canada to Wyoming, buying and selling cattle, and gaining a virtual monopoly of the western Montana beef trade. For a home ranch at Cottonwood (now Deer Lodge), close to mines that were to spread the name Anaconda throughout the world, he paid \$90,000 in gold.

As the railroads pushed into the West, ranching began to take real form and substance. In 1881 Kohrs bought the D-S ranch and in partnership with John Bielenberg, his half brother, set up the Pioneer Cattle Company and ranged herds over the best grass of Montana. In 1890 Kohrs effected Montana's first big purchase of Texas cattle, and hoisted his total ranching resources to nearly \$1,000,000. He met a New Yorker named Theodore Roosevelt, became the latter's friend, campaigned for him, and in 1915 received a letter in which Teddy Roosevelt, disgusted with Woodrow Wilson, said: "I wish to Heaven *you* were President . . . Regard you as archetypical American citizen . . . This country could best be run by you Germans . . ."

Con Kohrs treasured Roosevelt's correspondence and sentiments, but he cared more for cattle. He directed the Pioneer Company and the home ranch through 1915, then died in 1918. Decades before that, however, he had talked with an amiable wanderer who had told him of an extremely pretty girl back in Iowa. Con Kohrs took this man at his word, went eastward, riding horseback the first 300 miles, and within a month had married the girl and brought her back to Montana. She bore him a son, who died while attending Cornell, and two daughters. It was one of these, Katheryn, who

married Dr. Otis Yancey Warren, a pioneer alienist from Virginia who had become superintendent of the Montana State Hospital. Their second son, Con, the youngest of three children, was born in August, 1907, two months after the death of Dr. Warren.

Young Con Kohrs Warren spent most of his boyhood in the company of his grandfather and his Uncle Johnnie Bielenberg. His brother and sister were only mildly interested in life on the old ranch. Con adored it. He liked the surrounding mountains—bare, mustard-brown, and capped with snow; the games with ropes and the brands of cattle. Like his father, he pored over books and, like his grandfather, he kept a personal saddle horse and rode alone into far spaces.

After finishing high school at Helena, Con Warren punched cattle for a year and then reluctantly agreed to go to the University of Virginia to study medicine. His father was a Virginia man and his brother, now a physician, was already doing well in the medical school at Charlottesville. Con Warren did not follow in his brother's steps. Instead, he gave much study to horses, and with his western drawl and cowpunching air won outstanding favor at the coming-out parties of Old Dominion debutantes. He had won a football letter in Helena, but he was never robust. During his sophomore year at Virginia he spent six weeks at Johns Hopkins (as a patient) and therewith returned to Montana with impressive medical testimony to the effect that he could live only in high air and open sunlight.

Con Warren was delighted. Happily he set out for Wyoming, where he spent a year and a half as a laborer on the big ranches. He came home in 1930 to take over the management of the Con Kohrs Ranch—in the face of collapsing markets and withering range. That was also the year he married and received, as a family wedding present, the white stucco cottage in which he and his wife and daughter live.

Except for the cottage, the ranch is broadly typical of the cattle-country West. Here are 6,200 acres, of which some 500 are planted to crops. Thus about 90 per cent of the entire ranch is range, and at least half of this is valid range in normal seasons. The buildings, fields, and fenced pasture occupy a level mesa about two miles square. Beyond the mesa are rough hillocks of open range, brown much of the year, green only in springtime or immediately after

summer rains. Beyond the roughlands the mountains rise, lavender and blue, snow-capped most of the year. These are the mountains of the great Sun River. Their high valleys and ravines hold luxuriant summer grass and, except in years of extreme drought, their rivulets provide a means of irrigation.

But to understand the Kohrs Ranch and what Con Kohrs Warren has done with it in the past seven years one must understand more than the topography. Where the West has many ranches of approximately the same size and value, it has only a few with such a financial backlog. The Kohrs Ranch itself is probably worth \$200,000, but the total Kohrs estate could hardly be valued at less than \$800,000. Thus, during the perilous thirties, Warren had had relatively large resources to draw on. They cannot be ignored in any fair appraisal of what he has done, but neither can they be offered as an explanation of his success.

Warren has done far more than lean against the backlog hewed by his grandfather. He has introduced and maintained a superior strain of purebred beef cattle. He has made extensive sale of purebred beef-strain bulls and heifers to ranches throughout Montana and other western states. He has maintained a model livestock establishment, from a standpoint of equipment as well as management—one visited by livestock breeders and growers from all parts of the West. And he has instituted an active and well-managed farm as part of a landholding which had never been seriously farmed. Raised as a cattleman, he has actually become a practical farmer, and this is a transition of timely significance.

At Kohrs Ranch I walked through a multitude of spick-and-span corrals down to the horse sheds. In 1931 Con Warren added thoroughbred Belgian horses to his ranch setup and bought an imported and registered stallion, *Block II de Nederswalm* of Antwerp. In 1939 Con built up his basic herd to about fifty brood mares, three stallions, and four draft teams, all registered Belgians. He believes that Montana needs a "reliable foundation" of horseflesh, and hopes that within thirty years he can make a real equine contribution to western ranching. Despite movie thrillers, there are still comparatively few good horses in the West.

If he were alive today, old Con Kohrs would probably favor a western renaissance of thoroughbreds. But he would have flinched at the breeding technique now practiced by his grandson. I found

Con Warren working at mechanical impregnation of mares; insurance of colt crops by means of impersonal gadgets, a more or less direct outgrowth of sire values in livestock.

Con Warren keeps a microscope in his shedroom instrument cabinet, shoots slides as the work progresses. Though ultramodern cattle breeders are beginning to use mechanical impregnation to multiply progeny of highly valuable herd bulls, Con Warren finds that healthy purebred cattle usually breed readily enough when left to their own natural ways.

But from a ranching standpoint, new style or old, problems of breeding are secondary to the basic problem of feeding. When grass and water fail, the rancher must carry on—by turning farmer and irrigation engineer. And it is no longer advisable to plow land not eligible for reliable irrigation. Flowing dry land merely gives the master thief, Wind, the chance to lift away the soil and to make still more vexatious the prevailing plague of dust storms. Kohrs raised cattle on native grass and shrubbery, but Warren must supplement range with reservoirs of feeds grown and harvested from fields or with watered pasture. He must fence the fields and pastures, rigidly limit the size of herds so that the grass will not be eaten or trampled to death.

Irrigation is an added burden to the new school of ranching. Con Warren's ranch now has its own irrigation system, watering five hundred acres, fed by two mountain creeks from snow water. Water is plentiful in the near-by Deer Lodge River. But this, like many other western rivers, is contaminated by discharges from mines which poison the soil and kill growing crops.

Con Warren plants about two hundred acres of the irrigated land in feed grains—barley, oats, wheat. He puts about twenty acres in mangels (or mangel-wurzels), a root crop somewhat similar to sugar beets, an excellent sweet feed for cattle. The rest of the irrigated acreage is given over to timothy, clover, and native hay for feeding horses and steers and to alfalfa for feeding cows and calves.

This means that the old ranch, once a vast arena of wild grass, is now dotted with fattening pens, haystacks, sheds, granaries, and small barns. It means that a shiny, new three-ton truck and a fleet of horse-drawn hay wagons rumble over the landscape, hauling hay and grain to feeding pens adjacent to cultivated fields, carrying feed and supplies to the farther winter ranges. It means a shed-

ful of the latest styles in farm machinery, numerous gasoline and electric motors, a crew of cowboys who have learned to double as farm hands, veterinarians, milkmaids, and nursemaids to mothering cows.

A cowboy is an agricultural laborer who has been fantastically romanticized. In the movies he still rides a bronco at breakneck speed and waves a ten-gallon Stetson. But the demands of modern ranching are more mundane and practical. With the approach of springtime, Warren and his seven "steadies" turn farmers. As soon as late snow thaws, they man the two tractors and tear into the fields for spring planting. They plow with gang plows, harrow with tractor or horse-drawn disks, sow seed with mechanical drills. They vie for tractor duty, reveling in its mechanical uproar. The tractors are supplemented with four draft teams, which means that the modern cowboy must know names and doubletrees as well as saddles. There are no more big drives of cattle; no more colossal roundups. Horseback duty is largely a matter of moving feeders from pen to pen; shaping winter quarters in home corrals; keeping breeding herds to themselves; serving as footmen to registered bulls, which occupy private pens and sheds.

Springtime brings a deluge of blessed events. It is foaling time for mares, and calving time for cows. With approach of spring, cowboys must confine expectant cows in a separate calving pasture, move bunks and blankets to near-by sheds. This maternity ward requires unceasing vigilance. The boss and his men must be on hand to make breed records of all arrivals, date of birth, parentage, and strain. When weather turns chilly, they must carry the newborn calves indoors, bed them in dry straw. When a cow has an inflamed udder, the calf must be bottle fed until the udder is healed. When the arrival is premature, the calf frequently fails to suck, which also calls for bottle feeding.

In old ranching days nature was left to take its course with foaling livestock. The "get" either survived or else it did not, and for a big-range herd "natural" loss of a few hundred calves was to be expected. But with present-day reduction of herd numbers, accent on purebred and registry, and higher values for animals, livestock obstetrics are a working prerequisite for the cowpuncher.

Warren spends as much as \$1,500 a year on formalities of testing, isolating, and otherwise outwitting Bangs disease (chronic abortion).

But his records tell that the best cure for abortion is good feeding—a carefully weighed ration with plenty of mineral content. Livestock obstetrics are becoming more exacting, and Con Warren finds his two years of premedical study of considerable help.

Finally, there is branding, intermittently the gayest and most gruesome of cowboy chores. The ranch uses the same old C.K. (Con Kohrs) brand which has ornamented Montana "cowbrutes" for three-quarters of a century.

But branding is rid of most of its former brutality. In place of the old-time branding roundups, where cattle were roped, hurled to earth by sheer cowboy force, held quivering and bellowing while hot irons were pressed to their flanks, Con Warren now brands while the cattle are still calves. Workmen lead the calves from the corral to the branding chute. While the calf stands imprisoned in a narrow, board-built cell, the brand is heated in a patent oil-tank furnace, then applied to the flank lightly enough to prevent damaging the leather. The calf bellows and plunges out to a snack of hay.

The new school of cowboys on the Kohrs Ranch are a gay, overalled crew, young and slender (save for the cook, who is old and fat). They get from \$50 to \$100 a month, plus board and lodging. They live in a bunkhouse in use for three cowboy generations, sleep in army cots neatly aligned, eat at a long and well-set mess table. For all the vases of flowers on the window sills, it is a strictly masculine establishment, almost military in routine. Sunday suits, dress-up hats, and tooled boots all wait for occasional nights off. Girls still like cowboys, but Warren's cowboys rarely like girls to the extent of matrimony. They read wild West and movie magazines, body-beautiful publications, the big weeklies, and now and then a book. They are great radio fans, particularly fond of dance music and ballads of the open spaces.

Con Kohrs hired roughly three cowboys for every thousand head of cattle; modern ranching is likely to require at least one man for every hundred head. But modern ranching has not broken down the ancient and invisible barrier between the bunkhouse and the ranch home. Each goes its own way, and even the bunkhouse dogs rarely associate with those at the ranch home. As for Con Warren's wife, she takes no active part in the conduct of the ranch. She is interested and informed, but she makes no pretense of directing anything more than the home. She and Warren have a life that is

neither solitary nor particularly social. They are not devoted to bridge, cocktails, or dancing. Their weekends are often hurried visits to parents and grandparents at Helena. For several years they used a pickup truck, but today they have a car. Occasionally they go to a movie at Deer Lodge (as do the cowboys) or to a concert in some larger Montana town. Every year or two they drive to one of the Midwest's great livestock shows or to New York for the opera and the theater.

Where Con Kohrs raised cattle to be butchered and eaten, his grandson is raising them to become parents and grandparents of cattle to be butchered and eaten. In the main, Warren sells herd bulls instead of steers, breeding heifers instead of beef cows. This calls for purebreds: eminent bulls, registry papers for every calf. Even today the purebred, as such, means little in cattle ranching. It is still a matter of developing types of young cattle which can carry more pounds of good beef on the same bone structure. That is a mundane and practical need to which old Con Kohrs gave heed. But as a student of cattle eugenics Con Warren is more ambitious, better primed with details.

He has invested as much as \$1,000 each in a bevy of Hereford bulls, headed by such high-sounding registry names as Western Domino, Dandy Perfect, Marquis Perfect, supplemented by about a hundred Hereford breeding cows. The breed herd is kept separate from other cattle, grazed on fenced pastures, fed and quartered in home corrals during winter. Young cattle and market steers continue to graze on common range.

In 1940 as in 1860 inability to foretell rainfall is the complicating factor both in range use and in routine of breeding. If a rancher uses his herd bulls to breed all cows that are fertile, and the next year is one of drought, that is just too bad. He must either sacrifice surplus stock at quick sale or buy feed. Either course is likely to be a road to the poorhouse.

But if the rancher limits breeding, and the following year brings a good grass season, he loses the chance for grossing a fortune. Ironically enough, remorse at having lost out on a cleanup is the rancher's surest road to ruin. It leads to overstocked ranges and skimpy feeding. That is always perilous. When cattle go into winter without fat, disease and casualties are almost inevitable. Once allowed to become "run-down," any beef animal is stunted. If it can

ever be "brought back," a tremendous amount of feed will be wasted in the process. During the recent era of stingy rainfall, tens of thousands of head of drought-stunted cattle in Montana and elsewhere proved marketable only for hides and bologna.

The free empire of grass which so lavishly cushioned the old school of ranching is finally gone. Modern cattlemen, Con Warren among them, are finding that rental of open range is rarely practicable for purebred herds. Improving beef qualities of a given breed tends to reduce ruggedness necessary for roughland range. That is the way of nature and the Chicago beef market. In the cattle game both are powerful factors. Cattle prices, so far as Montana is concerned, are almost wholly dependent on vagaries of the Chicago markets. Top prime steers are worth 50 per cent more than ordinary pickups, and a well-nurtured yearling frequently brings twice as much as a poor one.

So the new generation of cattlemen takes careful inventory of the "carrying power" of its lands. Con Warren has reliable grass and enough land under irrigation to "carry" about a hundred head of horses, about five hundred cattle. When good seasons come, his range acreage is still sufficient to carry three or four times that number. But Montana is a semiarid country, and good seasons for grass are but dishings of fate. So Con keeps his herds to proved minimum, or within 10 or 20 per cent of it, and seeks to better returns by improved feeding, breeding, and management.

For the new generation of cattlemen this is a typical goal, and a hard one. It is sounding taps to the western days of magnificent extravagances, wild betting, careless generosity. It demands new accent on routine, a rather hopeless warfare against persistent overhead, and continued glorification of the purebred. "Safe-play" ranching likewise puts new accent on young cattle—more calves and yearlings of the fast-growing ages, when grass and grain can be changed to beef with maximum directness. This means a higher percentage of bulls and cows, fewer adult steers, a rising need of breeding stock.

Con Warren is one of these conservatives. It is difficult to make a fair estimate of his ranch's annual income. One probably would not be greatly wrong, however, in putting the gross income at an average of \$25,000. Of this some 80 per cent comes from breeding stock and about 20 per cent from routine beefstock. The net profit,

of course, is something else again. Placing the ranch's valuation at \$200,000, one could hardly estimate the current net income at more than 3 per cent.

Here is another indication that cattle ranching is both harder and more exacting work than ever before. There are ever-growing difficulties in finance and credit. From his grandfather Con Warren learned the cattleman's gospel of independent finance—a gospel which has changed little during the past seventy-five years. Warren believes that this gospel, like the make-up of real cattlemen, is misunderstood by Americans in the mass. As a broad generality, cattle people are, as they long have been, a rather upright, God-fearing clan—a kindly people, generous in spending when times are good, inclined toward occasional operas and diamond rings. They want very much to be left alone to work out their own destinies—without government dole, mortgage, or meddling. In general, they have been anti-Roosevelt and anti-New Deal.

They know that their banks are not dependable in times of great stress. Since 1929 there has been absolutely no opportunity for the far western rancher to rebuild a cash reserve, which is as essential to the new school of ranching as it was to the old. With herd strengths drastically reduced, overhead items such as taxes, insurance, and breeding investments are perpetuals. Meanwhile maintenance overhead, lumber, paints, materials for building and repairs, farm equipment, seed, livestock medicines, and supplies (normally about one-third of gross income) have virtually doubled in price. Wages, another third of ranch gross, have advanced from 20 to 40 per cent.

Dust storms blow on. Ranchers combat the plague only by private resolve to plow no land which cannot be irrigated. But dry-land farmers, who must live from a chance grain crop, cannot be expected to follow suit. The still-powerful Montana Stockgrowers Association stays dubious of the innumerable new irrigation projects. Some of the water sites can feed only poor soil. Only rich soil can pay dividends on water bought at high prices.

Like the run of cattle-ranch moderns, Con Warren dusts off his fancy-stitched boots and holds to the entrenchments built by old-timers like his grandfather. He is neither licked nor on government

payroll, and, if continued improvement of feeding, breeding, and ranch management means anything, he will not be.

Any study of rural poverty cannot avoid the new importance of livestock to the rural scene. Livestock industries are today one of the soundest hopes of rural America. Love of the animal now emerges as an outstanding American mood, whether in town or in country. In terms of rural life, improvement of the animal is unquestionably the surest course for bettering our land and the lives of men and women who are tied to that land.

Love of the animal is closely related to a contemporary era of American conservation. According to averages and totals, the United States is by all odds the most beast-loving nation in the world. We are the only large nation in which total holdings of domestic animals approximate the human population.

This renaissance of animal interest and appreciation is readily accounted for. In a basic sense of the word man has always been "animal-minded"—from Old Testament days, when citizens measured wealth and political importance in terms of flocks, through the Middle Ages, when titles and ownership of lands were largely foundationed with animal properties, to our own frontier days, when the pioneer's prosperity waxed or waned in terms of cattle, horses, sheep, or dogs.

Today almost half of the American farm income is income from animals—from beef, pork, dairy products, poultry, mutton, wool, and other animal materials. As American soils grow poorer, the proportion of animal income grows greater. An animal crop represents the minimum drain on land fertility. A productive animal is in truth a factory which moves on its own power to convert rough bulky crops into any one of a hundred compact and essential products.

But our new age of the animal cannot be appraised altogether as cold economy. There is also to be considered the place of the animal in the inveterate creative urge of Americans. Heretofore in this perennial heyday of "creative" writing, creative painting, soap carving, and bazooka playing too little has been said about creative husbandry.

If one writes a great poem or story, or paints a beautiful picture, or perfects a great serum, or organizes a worth-while business, or

perfects some other important service to mankind, he is entitled to the superlative reward of creator's satisfaction.

Nowadays millions of Americans are beginning to realize a comparable delight and adventure in directing mysterious pigments of blood and magic clays of chromosomes toward developing a more perfect living animal than ever walked before. The subject may be the runt member of old tabby's eleventh litter, or the would-be successor to *Man-o'-War*, or a more contented cow which can produce 35,000 pounds of superior milk a year, or a lap dog that does not slobber. But the challenge is there, durable and real.

You may recall the old-fashioned road signs which said "Look Out for Livestock!" These wayside warnings are less numerous than they used to be, but the sentiment was never more pertinent. Year after year the percentage of American farm income accruing from livestock grows. There is no vestige of doubt that animal interest is a nation-wide American interest, or that rural America, as a whole, seems headed toward a new and improved pastoral age.

Today millions of acres of poor field land are on their way toward becoming grazing lands. Great spheres of the cotton-ridden South now look to livestock for agrarian salvation. Texas retakes her old station as producing center of the American beef cattle industry. There is a good chance that much of the neighboring Southwest may shortly become pasture for Texas-begotten herds.

Once the greatest of our grain states, Iowa now becomes the greatest of our hog states. The once-great cattle empire of Montana, Idaho, and Wyoming is tending at least in part to return to life as a great sheep empire. As repeated field culture saps the fertility of soil, good farmers of all sections are drawing on livestock as a means of saving the precious tone of soil chemical. That is why five of every six farm dollars earned in Wisconsin are now animal or poultry dollars; why an aged state like Vermont now has more milk cattle than people; why such livestock as sheep, milk cows and poultry are increasing with heretofore unknown rapidity in various parts of the country.

Incidentally it is worth noticing that the New Deal's soil conservation program is primarily a grass and graze program. Grass inevitably begets livestock. And practically the livestock grower

is a manufacturer as well as a farmer. Animals become his productive machines. Hay, grain, and grass are his manufacturing materials. He takes a bushel of corn and a forkful of hay and by means of livestock manufactures it into beef, pork, wool, or whatever his product may be. He is more of an entrepreneur than his neighbor, the field cropper. For livestock is a perennial rather than an annual crop. Its span of production is usually from two to five years. This foretells a longer tenure of land, a higher percentage of owner-proprietors.

According to the census, man is now the most numerous and commonplace of all "higher" forms of animal life. In the United States we have about twice as many people as cattle, about two and a half times as many people as sheep, three times as many people as swine, ten times as many people as horses, and perhaps six times as many people as dogs.

Yet today we are the greatest livestock nation in the world. Though Australia has more than twice as many sheep as we have, though China has almost three times as many hogs, and British India about three times as many cattle, United States registry, distribution, current values, and total current returns from livestock are pre-eminently world leaders. Never before were there so many purebred or registered animals in the United States as there are today. Good sires and dams were never more genuinely revered. Commercially this is perhaps the most basic and challenging phase of the entire livestock picture.

A pedigree is merely a properly vouched statement of the lineage of a given animal. During the heyday of the Insull empire, pedigree livestock became a plunging fantasia in unexplainable prices. Those were the days when a Holstein-Friesian calf changed hands for \$100,000; when bulls with lives insured for as much as \$75,000 each were being hired out at rental fees ranging from \$5,000 to \$10,000 a year; when Joe Gossard was selling his Berkshire boars at \$10,000 apiece. The times were crazy.

Then the inflated, foreign-born purebred industry collapsed, somewhat in advance of the fall of the Insull empire, and for much the same reason. Today our newer school of pedigrees becomes truly an American institution, stressing tangible and visible results of American breeding and American presence of sires and dams. Breed records and credentials are becoming vastly more legitimate and

practical. Today we have in the United States a world-famed and unrivaled assortment of breed record associations for raisers of most domestic livestock. Included among them are eight national breed record associations for beef cattle, six for dairy cattle, sixteen for sheep, thirteen for swine, five for draft horses, seven for light horses, two for goats, one for donkeys, and two for ponies.

As nation-wide institutions these breed record associations have become an impressive phenomenon of today's America. Primarily they are business establishments of a highly creditable sort, supported by membership and animal record fees and directed by local, or regional, and national officers. But they are also becoming convincing proof that common interest in a given breed or species of animal builds strong fraternity among growers. Love of the animal remains one of the most enduring and dependable of American interests. Chances are a hundred to one that the farmer who owns livestock is less poor, less dependent, and more securely established than the farmer without livestock possession.

11

PO' FOLKS DOWN SOUTH

THE essential economy of the Old South remains an economy of cotton. It is now to be noted that North American cotton seems to be on its way out of solvency. United States cotton faces continuing collapse of indispensable foreign markets. To-day other countries can, and do, raise better cotton on richer lands at lower cost per pound. Today, even in our own country, technical requirements for manufacture of cotton goods change rapidly, making a high percentage of southern poor-land cotton virtually unusable and therefore unsalable except in government warehouses, which are already crammed with older cotton. A gigantic European war now destroys cotton import credits throughout Europe and the British Isles, throws merchant fleets out of operation, engenders bitterness toward our supplies and enhances possession of cotton-growing areas beyond our boundaries.

The international geography of cotton has changed tremendously during the past half century. But for purposes of this chapter I am referring primarily to the ante-bellum cottonlands of the Southeast and West South, particularly the states of Arkansas, Louisiana, Mississippi, Alabama, Georgia, and the Carolinas. According to the census, these remain the "cotton states." Within their boundaries are the enduring strongholds of cotton plantations and the far greater enumeration of incidental cotton farms upon which average cotton yields are only about 225 pounds per cultivated acre and where overhead costs for growing cotton range from 7 to 15 cents per pound.

Contrary to credos begotten by southern historical novels, large plantations are not, and never have been, the mainstay of southern agriculture. According to the most reliable records at hand, at least

70 per cent of all farmers of the ante-bellum South did not own slaves, and at least one-half of the slaveholders owned less than five slaves. The greater part of the "Old" South was a miscellany of small and far-scattered tracts of land tilled by single families. This picture is essentially true today, when hundreds of thousands of comparatively small farms, tilled by from one to four families, make up the overwhelming majority of all farms of the cotton-growing Old South.

Prior to the Civil War there were probably 30,000 plantations within the "cotton states." The census of 1910 listed the plantations (farms accommodating five or more families of tillers) as 33,908. The agricultural census of 1935 and the general census of 1940 suggest that the number of plantations remains approximately the same.

In any case, this is less than 3 per cent of the total of active farms of the cotton South today. It is further noteworthy that the distribution of plantations and their groupings remain almost identical to plantation locales of 1860: in the Atlantic Coast plain of the eastern Carolinas and east Georgia, the black belt of inland South Carolina, Georgia, Alabama, and Mississippi, the Upper Piedmont of the western Carolinas, north central Georgia and eastern Alabama, the Mississippi ridge country of eastern Mississippi, the Mississippi bluffs of the Memphis area and lower southwest Mississippi, the delta country of the lower Mississippi River basin (in the tri-state lowlands of Arkansas, Louisiana, and Mississippi); the interior plain of south central Arkansas and central Louisiana, the Red River lowlands of southwestern Arkansas and northwestern Louisiana, the Arkansas River lowlands of central Arkansas, and the Muscle Shoal basin of west central Tennessee.

To T. J. Woofster, Jr., and his associates in rural research we are indebted for the following composite picture of the average southern cotton plantation as it is today. This picture is based on "rounded averages" for 646 plantations recently surveyed:

"The typical cotton plantation includes a total of 907 acres, of which 385 are in crops, 63 idle, 162 in pasture, 214 in woods, and 81 in waste lands. Approximately 86 per cent of the 907 acres was owned by the operating landlord and 14 per cent was rented from other owners. Of the crop land harvested . . . 44 per cent was planted to cotton . . .

"The plantation had a total value of about \$28,700 (excluding operator's residence, gins and commissaries) of which \$21,700 was in land, \$3,900 in building, \$1,900 in animals, and \$1,200 in implements. The average long-term indebtedness was \$1,700.

"The typical plantation was occupied by 14 families, exclusive of the landlord's family, of which 3 were headed by wage hands, 8 by sharecroppers, 2 by other white tenants, and 1 by a renter. Of these families 2 were white and 12 were Negro. The average family, the head of which was 41 years of age, consisted of about four persons, of whom two to three were employable. The average number of years of residence . . . was 8 years for all families, 7 for wage hands, 7 for croppers, 11 for other share tenants, and 13 for renters.

"The typical plantation had a gross income of \$9,500 . . . of which approximately \$7,000 was obtained from sales of crops and livestock products, \$900 from A.A.A. payments, \$200 from land rented out, and \$1,400 from home-use production.

"The net plantation income, after deducting expenses, was \$6,000. The operator's net income averages \$2,600, leaving \$3,400 to be divided among the tenants. If 6 percent is allowed as the return on the landlord's investment, he received approximately \$850 as his labor income, or \$2 per crop acre.

"The average tenant family had a net income of \$304, one-third of which was derived from home-use production. Wage hands had a net income of \$180, croppers \$312. Other share tenants \$417, and renters \$354. The average tenant family received a subsistence advance of \$13 a month for 7 months of the year."¹

This picture, highly contemporary, is not particularly heartening. But it is bright in comparison with a more general agrarian panorama of the rural South.

Though the plantation is a distinctly minority phenomenon of today's South the institution remains a shaping force to a far-flung and populous agriculture which touches the lowest depths of rural poverty in the United States.

Mr. Woofster makes an enlightened summary of this reality:

"Plantation customs and ideology set the pattern for relationships in smaller farm units. This is true because of the dominance of the plantation in southern rural life. Large planters persistently emerge as the political and economic leaders of the cotton areas. Even if there are only four or five large plantations in a county,

the ownership of these considerable properties, and the prestige of success on a large scale, makes it easy for the planters to assume prominence in community control, if their personalities fit them for leadership. Add to this a sentimental attachment to land as a symbol of aristocracy and the consequent family ties to the land, and the plantation stands out as the basis for hereditary oligarchy in southern community life.”²

In the South, as a whole, cotton strongholds have changed remarkably little since the Civil War. The Negro tenant and his po' white sharecropper neighbor have replaced the slave. The numbers of small-farm proprietors has diminished, but during the past quarter century persistent growth in numbers of tenants and sharecroppers has colored the mill run of southern farm news. With this goes a steady fall of farming income. Southern earth grows poorer. More than half of all the country's land surface which the National Resources Board contends should be completely withdrawn from agriculture, is cotton land of the Old South. Since 1910 farm mortgage debt throughout the seven cotton states has quadrupled. Throughout these states long-term mortgage indebtedness now totals 40 per cent of the combined assessed valuation of all farms. Besides this, more than half of all plantations apparently require additional short-term loans, which are usually devoted to “carrying through” tenants or sharecroppers during winters and plantingtime.

Deplorable living conditions accompany this deplorable finance. A study of farm housing in the Southeast in 1934 shows that wells are the source of water for over 80 per cent of all rural homes and that from 3 to 17 per cent of homes do not have wells, springs, or any other assured water supply. At least 20 per cent of all rural homes are entirely lacking in backhouses and less than one per cent have flush toilets. In some areas of cottonland as many as one-fourth of tenant homes do not even have stoves. Throughout the cotton South as a whole only about 30 per cent of tenant dwellings are screened. Throughout the seven cotton states between 90 and 95 per cent of tenant homes are unpainted frame dwellings.

In the deep South as a whole appraised value of dwellings of rural white families is approximately twice that of the rural Negro families. But according to preliminary estimates of the 1940 census, the average appraised value of farm dwellings in the states of Alabama, Arkansas, Georgia, Louisiana, Mississippi, North Carolina, and

South Carolina is lower than that of the United States as a whole, or of any other geographic division of it. The average value of all rural dwellings in these seven cotton states is \$467, whereas average value of farm dwellings in the Middle Atlantic states is \$2,237; in New England, \$2,218; in the East North Central, \$1,559; along the Pacific Coast, \$1,617; in the West North Central area, \$1,559; and in the Mountain states, \$989.³

Average values for dwellings of farm owners in the Carolinas and Georgia (South Atlantic states) is \$782; in Alabama and Mississippi (East South Central) \$711; in Arkansas and Louisiana (West South Central) \$512. For tenant dwellings median values of farm are \$374, \$361, and \$314 respectively. According to a survey of farm housing made in 1934 by the Bureau of Home Economics of the Department of Agriculture in co-operation with the Civil Works Administration, the overwhelming majority of farm homes in the seven cotton states are unpainted frame dwellings. In Mississippi such houses include two-thirds of all owner homes, and more than four-fifths of all tenant homes. Ninety-three per cent of Negro tenants of Louisiana lived in this type of building, as do more than a million rural families of the South.

Diet standards of cottongrowers are fully as low as housing standards. So are their standards of clothing: brogan shoes, home-made underwear (if any), cheap gingham dresses, cheap straw hats, patched overalls, "hick'ry" shirts, and no socks are the accepted rule. The Woofster survey contends that the average cotton tenant lives for eight months of the year on a cash advance averaging \$13 per month, for an average tenant family of 4.4 persons. Obviously, not all this money can be spent for food. The advance must also cover emergency or habitual needs of medicine, tobacco, kerosene, and clothing. The staple foods are salt pork, flour, lard, sugar, coffee, and molasses. From firsthand interviews with storekeepers in cotton-lands of Arkansas, Mississippi, and Tennessee I gather that the sharecropper's scanty dollar is spent approximately as follows:

For food 65 cents, divided about as follows: flour, 24 cents; lard, 11 cents; meat, 10 cents; sugar, 5 cents; coffee, 3 cents; molasses, 2 cents; condiments, 2 cents; miscellaneous food products, 8 cents. Roughly 15 per cent of the sharecropper's cash or store credit goes for clothing; 4 per cent for medicine; 5 per cent for tobacco; 11 per cent for household furnishings and miscellaneous home supplies.

Recreation goods, toys, and minor luxuries are almost completely absent from the buying picture.

The tenant's spending is heaviest during summer and autumn months, about two-thirds of his total income being spent in less than one-third of the year. Storekeeper's ledgers tell that his hardest times are during winter and early spring, when roughly nine-tenths of all his available cash or store credit must go for the rough staple foods.

In terms of cotton tenure, home gardens remain a minority item, though their number increases with the exhortations of county agents and of home demonstration agents and other working arms of the Department of Agriculture. Still only a minority of cotton farmers have yet acquired the "gardenin' habit." Their home production of meat, usually pork, and milk and other animal products is seriously handicapped by scarcity of refrigeration, which means that most home-grown produce must be eaten only during the cool winter months. Traditionally landowners have not been friendly toward home gardens or home family orchards for tenants' use. Such resources are profitable to owners only in so far as they reduce the need for cash advances to tenants or croppers.

It is my own long-term observation that malnutrition is broadly characteristic of the cottongrowing rural South. During many years I have watched the physical symptoms of commonplace malnourishment—rickets, partly starved children, a preponderance of toothless or snag-toothed adults, eye infections, carbuncles, and skin sores. Time and time again in tenant homes I have watched children and adults alike gulp their scanty food like hungry wolves. Yet this subject, too, is inadequately measured by capable research. In 1937 the Mississippi Agricultural Experiment Station published a detailed study of eating habits of cotton tenants in a given county of Mississippi. Though limited in scope, the work stands as a convincing cross section of sharecropper eating habits:⁴

The survey tells that cotton farm families are, as a rule, supplied with barely enough protein and phosphorus to maintain life; that the supply of calcium is sufficient, though iron is seriously inadequate, and that vitamins present in green vegetables and fresh fruits are seriously insufficient.

Health statistics of the cottongrowing South give powerful sup-

port to this contention. Failing health of the rural South is further aggravated by infamously poor housing. Lack of screening persistently hoists the toll of deaths and illness resulting from malaria. Primitive water supply and want of disposals holds typhoid deaths in insistent and otherwise unnecessary prominence.

Poor diet is the principal cause of pellagra, a ruinous malady now almost entirely confined to poor folks down south. For the United States at large annual death rate from typhoid and paratyphoid is about 2 out of each 50,000 citizens; in the seven cotton states it is $6\frac{1}{2}$. The national death rate from malaria is about 1 in 50,000; in the South it is 8. For the country at large pellagra deaths are slightly more than 1 in 50,000; in the cotton states the figure is $12\frac{1}{2}$.

These figures are based only on deaths. They do not compute the tremendous losses in habitual illness or the many types of chronic invalidism which result directly from malnutrition. Further, these totals include the entire rural population of the seven cotton states; planters, farm owners and inhabitants of villages, as well as tenants and sharecroppers. It is a reasonable inference that the death rate among sharecroppers and tenants is materially higher than among the other groups. The total situation, however, is best described by the word "terrible." So long as a vast population is habitually undernourished public health campaigns are about as beneficial as the serving of meat sauce and mustard without any meat.

According to the *Southern Medical Journal*, with the single exception of North Carolina, every state of the South now shows a stubborn increase in malaria mortality. The authors of the report⁵ suggest that "the depression which, in its general impoverishment and degradation of the population, has had no equal since the recognition of malaria as a public health problem in our midst, is probably the most important contributory factor."

Vital incompetence of today's cotton husbandry finds further expression in paucity of communications. For example, records of the agricultural census of 1935 show that in a great sharecropping arena such as the Red River basin (where 79 per cent of all inhabitants are cotton tenants) there was only one telephone for every 96 inhabitants, one passenger automobile for each 14, and one

copy of a national magazine for each 23. In the delta belt (where 90 per cent of the entire population are sharecroppers or tenants) there was one telephone to each 68 people, one passenger car to each 13, and a national magazine to each 25. (And neither of these important tenure regions has a bookshop within its far-spread and verdant confines.)

Sharecropping tends to be an archenemy to public education. So, in general, is all the feudal husbandry of cotton. For cotton, as a crop, was begotten in ignorance. By tradition, the plantation slave was illiterate. In the year 1850 such pre-eminent cotton states as Arkansas, Mississippi, Georgia, and Alabama enforced statutes which named the teaching of Negro slaves either a misdemeanor or a criminal offense. By tradition, the plantation system is one in which the landlord furnishes the brain and the tenant only the brawn. (However, after considerable personal and scholastic acquaintance with plantation proprietors and considerable study of brawn expenditures by everyday sharecroppers, I note a penetrating scarcity of both commodities.)

Assuredly a substantial part of the cotton South's failure to use land intelligently, to diversify crops, and to work directly for higher standards of food and health and housing is directly traceable to pathetic feebleness of public education in the cotton country. Ironically, abominable diet and housing, prevailing poor health, and incompetent penny-wise and dollar-foolish and long-disproved husbandry of land are foremost contributors to the incompetence of cottonland education.

The typical cotton tenant farmer of today is little schooled or entirely illiterate. He is reachable only by experiments in adult education, and only then when the landlord chooses to co-operate.

Southern schooling remains a vexatious and difficult challenge. The schools of the cotton country are preponderantly rural, and country schools throughout the United States are deplorable. But schools of the cotton states are below average. In terms of juvenile literacy, school attendance, grades completed, length of school term, teacher's salary, funds expended per pupil, and value of buildings they are at the very bottom of the national list.

Public education of the South is fronted with incessant barriers. The worst of all is a smug, careless apathy on the part of the majority population. There is also the perennial racial prejudice which

requires separation of schools on a purely racial basis. Further, the actual planting, tilling, and harvesting of cotton keeps tens of thousands of school children away from schools. Tenancy causes families to make frequent moves during the school year. And it keeps the majority population so abjectly poor that the majority population ceases to give a damn.

In the seven cotton states percentages of illiteracy of rural adult population range from 10 per cent in Arkansas to 23.7 per cent in Louisiana. Probably the real percentage is considerably higher since census takers are inclined to gauge literacy merely by a citizen's ability to sign his name. (The mere ability to make a longhand signature is not compelling proof of literacy.)

School population of the cotton South continues to grow, because the population of school-age youth is heavy. Yet the country-school education today carries the white student only to or through the sixth grade (one-and-a-half years less than the average country schooling for the United States as a whole). For Negro youth rural schooling of the cotton states is three and a half years less than the skimpy national average. Recent estimates of the United States Office of Education show that average lengths of school terms in the preponderant one-teacher schools of the cotton states is 166 days per year for white children and 123 days for Negroes.⁶

During 1931-1932, a typical "depression year," average annual salaries of all rural schoolteachers of the cotton states ranged from \$485 in Arkansas to \$702 in North Carolina. Apparently the picture is essentially the same today, except for the salaries of Negro teachers which in the states of Alabama, Georgia, Louisiana, Mississippi, and South Carolina now average less than \$300 per year.

With teachers' salaries the lowest in the United States, teacher qualifications are correspondingly low. For example, in the state of Arkansas only 6 per cent of country schoolteachers are college graduates and only 22 per cent have ever attended college.

Where cotton is cultivated most extensively, rates of illiteracy are highest. "This makes it scarcely possible to question . . . that the density of colored population, and the dominance of cotton . . . are economically allied, and that the condition of the economic alliance status attendant upon such alliance is responsible for the illiteracy . . . Any plan looking toward an immediate amelioration of

the condition of illiteracy in these areas cannot be worthy of mature consideration unless they take into consideration . . . an improvement of the economic alliance above referred to . . .”⁷

Apropos of the above, we may note that the white man of the cotton South continues in control of the educational and political purse strings, and that when money is to be had, the palefaces take most of what is to be taken, with too little regard for proportionate populations of white and colored. The Bureau of Education⁸ offers the following table of per capita expenditure for teachers' salaries by percentage of Negroes in the total population:

PERCENTAGE OF NEGROES IN TOTAL POPULATION	PER CAPITA EXPENDITURE FOR TEACHERS' SALARIES	
	White	Negroes
Counties under 10 percent Negro	\$ 7.96	7.23
Counties 10 to 25 percent Negro	9.55	5.55
Counties 25 to 50 percent Negro	11.11	3.19
Counties 50 to 75 percent Negro	12.53	1.77
Counties 75 percent and over	22.22	1.78

Controlling publics of the cotton states remain apathetic toward public education generally and they are too often and too openly belligerent toward Negro education. To this somber plaint I add the conviction that the social outlook of the cotton states remains to too great an extent a quandary in sheer unexpurgated silliness. Stupid and childishly unreal, yet altogether connotative of muddle-headed thought and action in the cotton kingdoms is the near-fantastic panorama of the southern constabulary. Suh and ma'am, let us now behold!

The fair name of Bullthrupp has been sullied. Apparently the defamer took out for the swamps or the dense brush. In behalf of the Southland and the Anglo-Saxon race, something must be done about it . . . Something is done about it. Bloodhounds and the constabulary!

The sheriff telegraphs the warden at the state prison farm to send on the dogs. Thereupon the warden crates up the official pack and ships them punctually to the accursed county. If connections are good the hounds may arrive on the night following the night upon which the crime was committed.

The unquestionable scenters and trailers are taken to the besmirched spot and given the scent—a glove left by the defamer or a shred of his pants which caught on the sill as the villain wriggled through the window to his ignoble escape. If none of these is available, any old shoe or piece of cloth will do.

The leader of the pack, a deep-jowled canine with a cleft right ear, sniffs at the bit of evidence and howls. That is his cue. He is trained to howl long and sonorously at a minimum of provocation. On such an infamous and puzzling case as this, he probably stands and howls for half an hour. Then he commences to limber up. He places his nose close to the ground and becomes the very picture of squirming activity. Meanwhile the remainder of the pack are given a whiff of the evidence and they, too, howl.

The sheriff and his deputies stand about conversing in low, dark whispers. The countryside assembles with borrowed shotguns and pistols. The hunt is on. Wives cry for their husbands not to go on the man hunt, and mothers box their young sons' ears and send them on home and later chastise them for stealing out pappy's pistol from under the pillow.

The bloodhounds are boooing and plunging and participating in embarrassing familiarities. Directly the leader swings off on the scent. The pack follows, the deputies follow. So, also, does the mob. A couple of younger dogs emit adolescent roarings and take out through the brush after a rabbit. The lankiest deputy herds back the canines, cuffs and curses them comprehensively.

Now, the constabulary believe the bloodhounds infallible, with reservations. The first scent is generally erroneous. So the first hours of the man hunt likely end at the front gate of the Baptist minister or the town's leading merchant or the WPA administrator.

This will never do. Some little snivelface makes an impious remark. The officers and assembled citizenry look extremely silly and herd the hounds back to the place of beginning.

This time the leader starts off in the opposite direction and ends up at old Dago Joe's stand down by the tracks. He rares up on the counter and smells of the nice smelly buffalo fish. The citizenry are sure they have located their man. They always knew Dago Joe wasn't the respectable kind. But, alas, the paternal hound decides that he does not relish buffalo fish and off he goes to the railroad

tracks, and there the trail ends. For at the tracks he halts and commences to bay loudly.

There can be no doubt now. The defamer of the name of Bull-thrupp has hopped a freight train.

In the village the constabulary is vested in the town marshal. The probabilities are that the marshal is a slightly infirm citizen in his garrulous fifties; that he wears firemen's suspenders, gold front teeth, slaunchy spectacles, and a pearl-handled forty-four; and that he is a sustaining elder in his church. The heaviest burden of marshalship is that of ennui. He must be never-endingly pottering about in quest of human interest. The village basks in lazy amiability and dirty stories. The marshal absorbs and perpetuates the flow of scandal. As custodian of the law, he is generally around and outspoken at pie suppers, weddings, carnivals, and tent shows.

The compleat marshal has still other functions. He can loaf down at the filling station corner, direct tourists, and take in road information and road talk. He can give audience to the reflections and mechanistic philosophies in circulation over at the O.K. Garage.

Of course, his most dependable nook is beside the monkey stove in McGillicurdy's General Merchandise store. There he can help the rural lads at selecting shoes and shirts, fill in the vacant end of a checkerboard, or add to the conversational romancing about hound dogs and hunting.

Officially speaking, the town marshal has little to do. Occasionally he has opportunity to break up a crap game among the cotton pickers or to shoo off a decrepit bum or a wandering Negro who has no obvious purpose. But official action in the more spectacular cases—murder, stabbing, hanging, wife beating, and burglary—fall generally to the county sheriff and his deputies.

The old-time southern sheriff has undergone several alterations. He no longer wears the flowing black beard of the mad nineties. On the rare occasions when he goes forth to enforce the sovereign law he usually carries a shotgun loaded with buckshot instead of the long-range rifle. But most of the time the sheriff's guns and handcuffs garnish the walls of his office in the south wing of the courthouse. His most frequent mission of utility is that of dehousing worthless or nonproductive tenants. The actual labor of these removals falls to the more assiduous deputy. But the sheriff makes out

the papers, offers sympathy to the ruffled landlord, and collects the fees in behalf of the county and of blindfold justice.

A sheriff cannot function as an entity. He must have his deputies and deputies include several species of the human animal. First among them is the sheriff's tough son.

We will take it that Sheriff Dogbody, of Pawsuaget County, back in the days when he was raising peaches and watermelons, begat a son named Elmer. Elmer got off to a rough start. Before he was fourteen, it was about all his father, then foreman of the grand jury, could manipulate to keep Elmer from being packed off to the reformatory for shooting at the neighbors with a cat rifle.

In the course of his sixteenth summer Elmer burglarized the wholesale grocery house. His father, then deputy collector, sensed the inexpediency of longer boarding such a reprobate of a son. Thereupon Elmer was sent to a military academy up in the alfalfa belt. But the life of a soldier appeared to have no permanent appeal for the lad. Just as his papa is getting helped up over having cornered the Democratic nomination for sheriff, there is Elmer home again.

Something has to be done about it. In Pillowville Elmer has more idle time than he has innocent diversion. There are few jobs that Elmer wants and none that want Elmer. So Sheriff-elect Dogbody sighs and selects his son for a deputy. He does not want Elmer to get in on any of the dangerous jobs. Neither does Elmer. So Elmer draws his star and six-shooters and upholds law, tests the confiscated liquor, and sees that order prevails among the Negroes in the county jailhouse.

Then there is the expeditious deputy, a silent understudy of the sheriff himself. He pulls strings, paints bridges, clinches productive bootleg deals, keeps an eye on the county poor farm, and attends to incidental executive details, the manipulation of which requires mature discretion and a weather eye. The expeditious deputy accompanies nonbelligerent prisoners to the state penitentiary and at campaign time stumps for the sheriff and on election day hands out cards and engineers votes.

But occasionally something has to be done. There may be a shooting case with embarrassing ramifications: a gun-toting bootlegger who refuses to divvy up as becomes a professional gentleman or a

fighting Negro to be corralled and captured. It is for missions such as these that the sheriff keeps his daredevil deputy.

The daredevil deputy is at once the delight of rural youths and village idlers. It is generally understood that he has shown some pretty rapid gunplay during his career, that he can draw with the quickest. And when there are bad eggs to be handled he goes out to handle them.

It is highly probable that the daredevil deputy suffers from a mania of some sort. Possibly he was gassed in the World War or converted at a revival meeting.

One can hardly expect a daredevil to be without his failings. Possibly he has been known to swig generous portionings of confiscated liquor and show untimely jubilations. Or maybe he has been noticed in the company of the wrong kind of ladies. But the community agrees that he is on the whole a doggone good fellow. He makes his headquarters at Red's Chilli House. He borrows the proprietor's sweater and boots. He slicks over the counter and fries his own hamburgers. He discusses the effectiveness of soft-nosed bullets and narrates some of his harder cases to circles of rural customers and goggle-eyed high-school boys.

The daredevil deputy is the moral and intellectual equal of a boy Ku-Kluxer. In times of turmoil he is the toast of the countryside and no sprinkling of the mire of scandal can rob him of his halo of romance. Like Ichabod Crane, he is welcome wherever he chooses to tarry and while on the man hunt the daredevil deputy takes precautions to let noonday find him in close proximity of a farmer with a good table.

Invited in, he strolls back into the kitchen, gossips with the wife and puts the daughter into a flurry of gigglings. He admires the hired boy's coon dog and shows professional appreciation of the old man's prowess with a repeating shotgun. Enсonced with an admiring and attentive audience he partakes heartily of the victuals and table cheer. Having regaled himself with a good mess of squirrel and dumplings and mayhap a swallow of cordial he continues on his official way.

In professional crises the daredevil deputy seems to escape bullets with astonishing ease. On the other hand, he rarely succeeds in hitting whomever he is shooting at. So his lot is not, after all, such a gory one.

The reason for this happy generality may be that the pursued one is as full of liquor as the daredevil deputy—maybe a little fuller. I would hazard the approximation that 90 per cent of the desperate criminals captured by the constabulary of the brush were amply intoxicated at the time of their capture—that they mistook the deputy for a bird of a feather or for another bartender—and realized the mistake too late to shoot.

In the cities of the Southland the police comprises the constabulary and it is in the cities with 30,000 to 75,000 inhabitants that the constabulary can be regarded as functioning in all its glory. For here are greater gatherings of poor people, both blacks and whites, and the dunderheaded nonprosperous provide splendid official opportunities for the wielders of the night stick and the conveyers of the Police Special. Occasionally there are patrolmen sent to stroll about in the creased-pants sections of the city but as a general proposition the beer parties and brawls of the better residents proceed merrily and without hindrance. But in the hamburger districts the cop struts in all glory.

A night at the police station shows a curious pageant of the fruits of the patrolman's industriousness. First there will be the bevy of colored boys brought in by Sergeant Williams from down in Martha's alley. The dusky youths wipe away their grins when the desk sergeant sternly asks the first up to the window how much he won. On receiving a grinning answer of "about fo' bits" the legal minion reaches forth, grabs the Negro and slams him in the face with a burly fist with a "No goddam nigger's gonna laff at me!" The rest of the culprits give their names meekly, shell out the contents of their pockets, and are herded downstairs to await the mercy of the police magistrate.

The next haul is by Patrolman Thrupper, who has the beat on the west side of town where the cotton fields reach right up to the Negro quarters. He has a Negro couple, an ill-shaped yellow girl and a shiny black man. Patrolman Thrupper says nothing but gives the desk sergeant a wink, and the desk sergeant, catching on, comes out from behind the bar and begins to search the boy. He pulls several cotton bolls from sequestered pockets and holds them for the inspection of the police reporter and the loafing patrolmen. It is indeed a carnival. Meanwhile the girl looks on and presently

both are taken down to spend the night with the city. Their crime is listed as 3747, for the name is too naughty to be placed on the docket.

So they come, or rather so they are brought. Petty thieves of ages ranging from seven to ninety-seven, gamblers, loiterers, and celebrators, most of them black. These are the convenient cases. The white drunk gives the custodians of law the most trouble. They are afraid, if they do not know him, to quell his tongue with a sharp crack of the night stick. The fellow may be a friend of the chief or of the sergeant. So, if need be they curse back at him and in an extreme case, providing the offender is puny and unsteady, they fight with him with bare fists until he becomes sufficiently docile to "take up."

And there are still more delicate cases, requiring greater finesse of manipulation. The besotted scion of a first family may become rambunctious and acquire the craving to kick out a restaurant sign or to shoot the night chief in the stomach. The first-strainer must, of course, be discouraged from such indiscretions but during the process of discouragement he must be handled with gloves, for the pugnacious one's family escutcheon is not to be blotched with a street fight or jail sentence.

The medium-quality white drunk sobers a bit presently, comes to a barred door, asks to call a bondsman, and goes meekly home on the arm of the champion who appears to bail him out.

There are telephone calls galore from anxious Negro wives and mothers asking headquarters' permission to come down and bail out their husbands or sons. But the answer to their queries is almost invariably an emphatic NO followed by an extensive discourse in substantiation of the theory of eternal damnation.

Foremost among the southern policeman's virtues is his occasional sense of gallantry. If the southern gentleman is too much occupied at framing elections, painting bridges, selling radios, or developing residential subdivisions to rise gallantly about every fortnight to avenge some insult heaped on the unsullied folds of southern womanhood, such an accusation cannot be heaped on the slender shoulders of the southern copper. For in him the lily-white females have a genuine protector, one to stand off the uppishness of the "nigger" and the cursings of the besotted wretch from across the railroad tracks.

The policeman can tolerate no affront to his womenfolks, or to anyone's womenfolks. The urge of gallantry may move him to drastic brutality or an outright murder. I covered the following case in Texarkana:

A Negro had been arrested on a charge of drunkenness. He was brought to the station house hilarious, bubbling over with bottled gaiety. When thrust in his cell he continued to sing and dance and jubilate. But a couple of hours later when he began to sober his songs gave way to maledictions. He strained against the bars and cast invectives at his captors or at anyone he could see in the jail corridor. Presently a patrolman brought in a neighborhood street-walker, a habitual frequenter of the station. The Negro continued swearing, sleepily, docilely. The patrolman took furious affront. He grabbed out his night stick, borrowed keys, and bent upon vengeance, opened the door and proceeded to avenge. The Negro sank to the floor senseless. An hour or so later he waked and called for water. He went unheard. The turnkey was occupied with a game of cooncan. On hearing the Negro's appeal another of the prisoners called for the turnkey. The jailer brought a mug of water but paid no attention to the Negro's complaint of a hurting about the head. By morning the victim's moans were more disconcerting. Annoyed by the mournful noises the turnkey called the Black Maria and had him hauled to the general hospital. There it was found that the Negro had suffered a fractured skull during the process of the beating. Half an hour later he died. His slayer was temporarily suspended from the force. Now he is back, and in good standing.

The business of being a small-city policeman proves increasingly profitable. The Southland's coppers have almost unmolested picking. True, they do arrest bootleggers frequently enough. But these are but the nondescript retailers, shoeshiners, black boys of the hotels, barbershop janitors, and down-and-outers who barter liquor by the pint and quart. But the stalwart policeman can superintend the bigger deals, concentrate on the wholesale trade. It is from this that he gets his money. He acquires his reputation for being an enforcer of the local-option law from his imposing total of arrests among the paltry retail traders. The chief smiles and fondles his

palms and the copper welcomes co-operation from the brethren of the constabulary.

Thus the defenders of the downtrodden go happily on. The sheriffs build big houses and the police chiefs bigger ones. Then they buy cotton farms and promptly go broke.

Race prejudice, fantasies, and folklore of aristocracy or "first families," are eternal southern contradictions. There are many others. I say this, having just finished a 2,500-mile trek through Arkansas, Mississippi, northern Louisiana, and middle Alabama, a far-flung stronghold of the master monarch, Cotton. It was 2,500 miles of strange noonday stillness, well-kept fields, and eye-teasing contradictions.

About ten years earlier I made a toilsome way through much of the same country along rutted dirt roads possessed of mudholes wherein man and mule or man and Ford had been known to sink out of sight. Now we skim through King Cotton's realm on paved highways, virtually all of them completed during the past ten years, magnificent surfaced roads linked with mammoth new bridges, the peer of any in the land. We passed scores of new schoolhouses, modern and attractive and fireproof country schools with mown lawns and running water and abundant windows. We saw a countryside of bountiful harvests and apparent happiness.

Home gardens become more numerous. One sharecropper to whom as a Red Cross worker I had brought repeated doles of salt pork and canned vegetables showed me his new livestock—two Jersey cows and a registered Duroc sow with a fast-expanding progeny of seven pigs. He then showed me his garden plot, half an acre well planted, well tilled, and ready for a late harvest. Overlooking our extremely mild protests he loaded my car with garden truck, all products of that productive half acre. Then he crammed a man-sized pipe with home-grown tobacco leaves and soliloquized:

"There's eatables in the cotton country now, mister: garden truck enough already to feed hungry people. It ain't worth nothin' in money. But it does tell one thing. Them Northerners and Easterners won't have to feed the cotton folks next winter."

We left in a haze of retrospect and tobacco smoke, marveling at change and contradiction. We passed a new airport which Arkansas highway workers were finishing off in tiptop shape. Next

we passed an ancient Negro who manipulated a water sled drawn by an ancient skewbald mule, a broad, awkward sled, on it a barrelful of sloshing water, all a picturesque remainder from days "befo' de wah." Then we sped by a field being harvested by a bevy of lank Negroes who swung old-fashioned scythes with all the telling grace of their African forefathers. Five minutes later we spied a modern double-rigged harvester which had spent a tremendously busy season.

The contradictory South! Water sleds vs. superfine airports, plunking banjos vs. rampant jazz orchestras, high finance vs. slipshod barter, mint juleps vs. Coca-Colas. The stately silence of a time-mellowed and myrtle-fringed plantation home may at any moment be broken by the overflow of Charlie McCarthy, or the superspeed rhythm of a dance orchestra. Colonel Guntah, late of the First Confederate Cavalry, may plod along Levee Street dreaming in iron-gray with gold braidings or he may dash by in a Cord roadster at approximately ninety-two miles an hour. You can never safely predict.

More attractive, better restaurants and hotels are making their way into Cotton's kingdom. Twenty years ago we found travel in the Southland an unending protraction of bad foods and beds and lingering indigestion. But now that the cotton country has acquired about 40,000 miles of first-rate highways, the quality of fare and quarters has risen consistently with the increase in travel.

We stopped at a wayside lunchstand where a dusky gathering were taking nurture in the form of rare and onioned hamburgers. We inquired about the prospects for fishing.

"Moughty good, mistuh. Dis yeah none of de niggehs commenced fishin' till afteh de crops was in and plowed and hoed. Plenty catfish left yit. . . . 'Cause, you see, lots a dem colored folks is quit bein' so wuthless since dey quit livin' on de WPA."

Since 1910 improved farm acreage of the seven cotton states has remained practically stationary. But during these thirty years the number of farm owners has decreased by about one-tenth, while the number of tenants and sharecroppers has increased more than 20 per cent. During First World War days and the early twenties, when cotton times were comparatively prosperous, tens of thousands of sharecroppers were enabled to own work animals and implements and thus became renters. But successively poor cotton years—

at least sixteen of the past twenty-five years have been eminently poor cotton years—the count of sharecroppers has grown by hundreds of thousands.

Expansion of the family-size southern farm is definitely halted. So, to a worrisome extent, is the possibility for improvement of land husbandry. Habituated tenancy molds the life and habits of the tenant, commands his earnings, his housing, diet, schools, and social resources. Much-talked-about changes in cotton agriculture, predicted outcomes of mechanical pickers and mechanical substitutes for hoe-and-row tillage, have thus far failed to offer material change in the status of growth of sharecropping. There is little remaining doubt that mechanized tillage and harvest of cotton are possible, but to date—because of rough terrain, feeble credit, primitive labor, and other factors—they have not been widely proved in terms of practical cottongrowing.

Rows of cotton remain roads to poverty.

12

DROUGHT COUNTRY

IN terms of practical farming the habituated drought belt of the United States includes the ten states of the Great Plains—the two Dakotas, Nebraska, Kansas, Oklahoma, Texas, Montana, Wyoming, Colorado, and New Mexico. About twenty other states are frequent sufferers from major drought. But the 96th and 100th meridians are lines of habitual hazard from drought. Thus throughout the Great Plains conditions of drought are comparatively chronic, a far-scattered evidence that the destinies of great crops are largely decided by long-term cycles of rain rather than by temporary precipitation.

Yet today 15,000,000 people live in the states of the Great Plains. Half a century ago the population was only 3,000,000. The promotion and growth of early railroads, which linked the settler to markets, the development of barbed-wire fence, which enabled the small homesteader to guard his fields against the ravages of open-range cattle, and the popularization of the windmill, to raise all-essential water to the surface, were noteworthy factors in making a great realm of semidesert temporarily habitable by man. During homesteading decades land was superlatively abundant and cheap, and land problems could be met temporarily merely by the casual expedient of moving on to other lands.

On the whole, the Great Plains were settled by a strong-bodied and prolific youth, which shouted and swore American or grunted German, rasped Polish, or exhaled French as it shambled or galloped up the dusty trails west. From earliest establishment the Plains Staters sold wheat and exported youth. Hasty plowing robbed the land of its irreplaceable treasury of native grasses. Production and

sale of wheat traded an enormous amount of soil fertility for a rather modest amount of money.

This huge block of states remains home for 6,000,000 farm people. In no state of the ten is the proportion of farmers less than a fourth of the entire population. In North Dakota it is 60 per cent. Farming and grazing still comprise the productive life of the entire section. Except the cotton belt, no other large area of the United States is so completely dependent on farms for a livelihood. The small town or rural village keeps its place as service station to farms or ranches. There are likewise sentimental ties between farms and towns. A majority of townsmen came from the farm; many still own or "play along" with farms. In all events, farming demands widespread respect and it is an issue of prime importance. For when farms prosper towns and villages also prosper; and when farms sink into poverty—so do the villages and towns of the Great Plains.

Far scattered homesteads still characterize this midcontinent agriculture. A square mile, or 640 acres, has become approximately the minimum sufficing farm, 400 acres the absolute minimum, and a trade area of 100 square miles is a minimum stake for survival of the village. Big cities are few. In all the million square miles of plains there are only seven cities with more than 100,000 people; only fifteen with more than 25,000.

In comparison with other parts of the nation people of the Great Plains are young—a maximum population percentage under six years of age; and a minimum over sixty-five.

For the Great Plains land-grabbing days came late—during the half century period between 1860 and 1910. During that half century the federal government was habitually eager to divest itself of a huge and ill-kept public domain. Rarely, perhaps never, has so vast an area of earth been claimed and occupied in so short a time and rarely, if ever, has such a multitude of land-takers attempted settlement under conditions with which they were so wholly unfamiliar. Tens of thousands of settlers, perhaps half the grand total, came with the avowed intention of staying only long enough to establish title to a tract of land.

It was the most rampantly cosmopolitan of any major farm settlement of the nation: Kansas, for example, of 1860 was populated by persons born in every existing state and territory of the nation and in 28 foreign countries.

Until 1860 the 96th meridian, marking the present cities of Lincoln and Beatrice in Nebraska, Topeka and Coffeeville in Kansas, and Gainesville and Houston in Texas, had been the figurative west wall of American land-taking. Between 1880 and 1890 geographic occupation was practically completed in Kansas and Nebraska and was spreading rapidly into all other states of the region. Frontier settlements pushed nearly halfway across the Dakotas, spread over most of Colorado, and rapidly covered central and western Montana. During the decade 1880-1890 the population gained 265 per cent in Montana, 201 per cent in Wyoming, and 299 per cent in Dakota territories. Within sixty days of 1890 a new-opened portion of east central Oklahoma was occupied to 259,000 persons. Between 1870 and 1890 the population of the Great Plains was more than quadrupled.¹

During 1890 to 1900 a cycle of drought played over this part of the country. Speculative land prices promptly collapsed. The remainder of Oklahoma Territory was opened for settlement. Immediately thousands of homesteads were abandoned in neighboring states and first settlers of western Kansas, western Nebraska, Montana, Colorado, Wyoming, and New Mexico began to shift to "other parts." Omaha, Nebraska's metropolis, lost almost half her population during that first telling decade of drought.

But the following ten years brought another succession of rainy summers. Great Plains population gained more than 3,000,000, or almost 40 per cent. Census figures suggested that man had at last "conquered" the 100th meridian. At last the Far West was booming, with a majority of the desert-takers from ten states within domestic boundaries—Missouri, Iowa, Illinois, Ohio, Kentucky, Tennessee, Arkansas, Mississippi, Alabama, and Georgia.

Since 1910 the farm population of the Great Plains has remained almost stationary, with the drier portions scoring slight losses of people and the more humid sections making slight gains. See opposite page.

Yet farm life has been marked with abrupt moves and restless wanderings. The tie which bound first settlers to particular tracts of land was never strong. It was easily broken by personal misfortune, by repeated drought, or grasshoppers, or other calamities. For half a century the processes of homesteading have been a ruthless and sweaty poker game.

FARM POPULATION OF 10 DROUGHT STATES, 1910 TO 1935 *

State	1910 Estimated January 1	1920 Census ^a January 1	1930 Estimated January 1	1935 Census ^c January 1	Percent Change		
					1910 to 1920	1920 to 1930	1930 to 1935
Total...	6,067,119	6,093,862	6,117,300	6,111,835	0.4	0.4	-0.1
North Dakota...	369,212	394,500	394,300	385,614	6.8	-0.1	-2.2
South Dakota...	370,820	362,221	287,300	358,204	-2.3	6.9	-7.5
Nebraska...	631,467	584,172	581,300	580,694	-7.5	-0.5	-0.1
Kansas...	830,197	737,377	701,900	703,743	-11.2	-4.8	0.3
Oklahoma...	1,022,016	1,017,327	1,014,300	1,015,562	-0.5	-0.3	0.1
Texas...	2,293,474	2,277,773	2,329,700	2,332,693	-0.7	2.3	0.1
Montana...	111,273	225,667	201,600	195,262	102.8	-10.7	-3.1
Wyoming...	52,264	67,306	72,100	74,507	28.8	7.1	3.3
Colorado...	202,857	266,073	278,600	276,198	31.2	4.7	-0.9
New Mexico...	183,539	161,446	156,300	189,358	-12.0	-3.2	21.2

* U. S. Census Compilations.

While new or relinquished land was taken as homesteads tens of thousands of homestead entries were being abandoned. Moving days continued.

Western Kansas illustrates the point. More than two-thirds of all farmers living in this area in 1895 had moved away by 1935. Less than one-tenth of the population has kept with the same land for as many as thirty years. In all portions of the state first homesteaders and their descendants constitute only a tiny percentage of the present population.²

Throughout the depressed thirties the restless movements of Great Plains farmers continued with little abatement. The census of agriculture taken early in 1935 showed an average of from 200 to 500 newly settled rural people for every county of the vast area. The census of 1940 reiterates this restless and apparently rather purposeless migration.

First homesteads granted by the federal government were the standard quarter sections of 160 acres. Uncensused thousands of first farms failed principally because 160 acres is not enough land to provide a family's livelihood in this high, dry America. By gradual stages the size of homesteads has been raised and through the dusty years average size of farm and numbers of farms have steadily increased, even though the total farming population has lately tended to remain almost the same.

"However continued study of the Great Plains Drought Area makes more and more apparent the fact that recent droughts are

not solely responsible for the present distress. Nor would the return of normal rainfall insure its prosperity. The nature of the climate, the character of the soil, and the extent of soil destruction which has attended the abuse of natural resources necessitate certain readjustments between the people and the land."⁸

AVERAGE SIZE OF FARMS IN 10 DROUGHT STATES, 1870 TO 1935*

State	Average Acres in Farms							
	1870	1880	1890	1900	1910	1920	1930	1935
North Dakota	176	271	277	343	382	466	496	462
South Dakota		(203	227	362	335	464	439	445
Nebraska	169	157	190	246	298	339	345	349
Kansas	148	155	181	241	244	275	283	275
Oklahoma	a	a	a	a	152	166	166	166
Texas	301	208	225	357	269	262	252	275
Montana	164	267	351	886	517	608	940	940
Wyoming	25	272	586	1,333	778	750	1,469	1,610
Colorado	184	259	281	384	293	408	482	471
New Mexico	186	125	177	417	316	818	982	832

* Source: Fifteenth Census of the United States: 1930, *Agriculture*, Vol. IV, table 12, p. 53.

And mere evacuation of farm population cannot accomplish the purpose. Certainly industrial development cannot solve the riddle, for the life of the Great Plains depends principally on agriculture.

Quoting Taueber and Taylor:

"Stability of residence itself is not necessarily a desirable goal but the high degree of mobility which has been characteristic of the Great Plains area indicates an unsatisfactory adjustment between man and his environment. Emigration as a technique for making adjustments is relatively inefficient, for it provides little assurance of betterment to the individual and rarely strikes at the base of the maladjustment involved. A high degree of mobility in a population impedes the proper functioning of those social institutions which are essential to a satisfactory farm life. Any successful program to adapt agriculture to the available natural resources would tend to reduce the volume of migration to and from the area. The success or failure of the efforts to control erosion and conserve available resources will be measured ultimately by the welfare of the people of the Great Plains drought area. Unless a satisfactory farm life can be developed on the basis of the resources of that region, no amount of modification of the physical environment will be worthwhile."

The same researchers offer a noteworthy and constructive suggestion regarding the control of migration:

"A well-equipped and widely used information service might be of considerable benefit to such migrating families. A service of this type would probably reduce the volume and extent of that portion of the migration which is based on rumor, misinformation, or on mere hunches, and, at the same time, it might lead migrants more directly to locations where satisfactory adjustments would be possible. It might also reduce the tragic mistakes which frequently occur when settlers relocating under unknown conditions, become victims of unscrupulous land speculators or dealers."⁴

Taking the Great Plains as a whole, from one-third to two-fifths of all farms are now under mortgage. Drought after drought has thrown its rural people more and more abjectly dependent on the federal government. Particularly in the northern plains, the Dakotas, Montana, and Wyoming, farmers and ranchers have "sold" a majority of range stock to the government, added crop and feed loans to an indebtedness already heavy, and by the thousands have registered for emergency relief.

During the twenties farm incomes of the northern Great Plains ranged broadly from \$1,000 to \$2,000 per year. In the middle thirties average gross farm income for the same area varied from \$600 to \$1,000. But huge proportions of the latter figure went as direct payments on liens and mortgages, halving the gross income.

Meanwhile, roughly half of the Great Plains years are drought years. In approximately one farming season out of six all crops are completely or approximately destroyed by drought. Good yields of wheat occur no oftener than one year out of five. Good oat crops materialize every third or fourth year. Scarcely one year in seven produces a corn crop. Frequent years of crop failures, or short crops, make difficult the storing of surpluses during the numerous lean years. Throughout the rampant pageantry of agrarian suffering and failure "small farms" (in Great Plains parlance, those of 400 acres or less) continue to suffer more intensely than the ranches. Small farms can spare less land for fallow and at least half, sometimes as much as three-quarters, of their entire acreage must be planted to crops in order to yield even a meager family livelihood.

Average value of farming machinery ranges from \$600 to \$900

per farm, with annual costs of repairs about \$100. Few of the farms have machinery now regarded as requisite for efficient operation and little of the machinery is kept in competent repair. Moreover, machinery and equipment are weighted and belabored with chattel mortgages. Like farms, they are victims of habituated delinquency. Average indebtedness ranges from \$10 to \$12 per cultivated acre.

Foreclosure continues as a serious menace to farm establishment. Mortgage records prove that foreclosure for debt was a serious menace over much of the Great Plains during the so-called prosperous era of 1921 to 1930. For example, in eleven typical counties of the Missouri Plateau area of South Dakota, 47 per cent of all active farms changed hands because of mortgage foreclosures during the twelve years between 1921 and 1932. By 1937 approximately 215 loans had been made for every 100 farms in the Dakotas.

The contemporary story of farm tax delinquency throughout most of the Great Plains shapes a tragic parallel. In scores of counties delinquent taxes were listed against as many as four-fifths of all farms during the past decade. In the Black Prairie region of North Dakota farm delinquency is 82 per cent of all farms.

Climate of the central Great Plains is characterized by wide extremes of temperature and by tremendous variation in rainfall and wind. But life of agriculture ebbs and flows with the weather. Ford County, Kansas, offers apt illustration. Researches by R. S. Kifer and H. L. Stewart of the Bureau of Agriculture Economics, United States Department of Agriculture, show the following summation:

"During a relatively humid period the population (of Ford county, Kansas) increased from an average of 0.77 person per square mile in 1883 to 8.86 persons per square mile in 1887, while the farm population increased from an average of 2.8 persons in 1887. During the dry period from 1887 to 1890 the farm population declined an average of 2.98 persons per square mile in 1891 and increased in 1892 and 1893 after the drought was broken. From 1893 to 1895, another period of drought, the farm population declined to a point slightly less than that of 1885.

"After 1895 the farm population of Ford county increased more uniformly than in the preceding decade, although periods of drought were usually accompanied, or immediately followed, either by a decline in population or by a period of standstill. From 1895 to 1932 each year in which the annual rainfall at Dodge City fell

below 17 inches, the farm population of Ford county remained stationary for a year, or declined. In all other years it increased . . ."

The southern quadrant of the Great Plains is the Dust Bowl country, where drastic wind erosion of light soil has commanded widespread attention. This attention is well justified. Here cultivated crops had provided from two-thirds to four-fifths of the combined gross incomes of all farms. But by the middle thirties farm incomes had fallen to from one-third to one-half of "normal" and even these drastically slenderized incomes were not for the most part from cultivated crops, but rather from forced sale of livestock to the government. In any grazing country the feat of acquiring farm income by sale of breeding animals is about as sound economically as selling one's false teeth in order to finance the purchase of groceries.

During the three-to-seven year drought of the thirties the Great Plains as a whole did not earn income sufficient to meet the actual operating expense of the farms. In Dallas County, West Texas, for example, only one farm operator in twenty in the grain section and only one in ten in the row-crop section reported receipts greater than expenses. For that matter, personal testimony indicates that thousands of the farmers, perhaps not less than one-third of the total, have been operating farms at a loss since the time of first settlement.

Drought, hail, and blowing soil remain the chief hazards of the Great Plains. Their destructiveness shows gradual ascendancy, as approximately half of the land remains under plow. Thus more livestock and a higher proportion of grasslands seem to be a first curative step. But increase in livestock enterprises calls for an increase in size of the ordinary farm and for the acreage in pasture. The present soil conservation program of the Department of Agriculture works consistently toward this end, during an interval when there is a chance that new sod may replace part of the barren and wind-blown fallow. Use of new grass and solvent increase of herds raise new problems in farm credit, in conservation of surface water, and in marketing. They foretell the birth of still other problems in a long, slow, and undramatic struggle on the part of today's plainsmen to live and multiply on lands on which others have floundered and failed.

While a third of the land area of the United States remains victim of recurring drought, at least four-fifths of the nation is subject to occasional drought of commanding consequences.

Invariably poor lands suffer most intensely from its ravages; and lack of stored surpluses makes the aftermath more destructive. This reality is most readily discernible in poor-land America; in the backwoods, particularly such areas as the Ozarks and the Appalachian foothills.

Time and time again because of drought shadows of famine and starvation have played over vast areas of this backwoods America. As a volunteer relief worker in the timbered hills of northern Arkansas I have encountered rural people, normally of easy circumstances, struggling barefoot and coatless through bitter-cold winters. I have visited a mountain family which elected to live on a sole ration of boiled corn rather than to beg or accept charity.

In tracing down a particularly distressing case I questioned the mayor of a far-back village and he said:

"Yes, they's some purty hard cases about. There's Jim, there, up the creek holler—livin' in a' old leaky smokehouse. Jim's got three young'uns rangin' from three to fourteen year old. Ain't nary a bite to eat in the whole place. Been livin' for a month out'n a mound of holed-up turnips and a couple or three slabs of salt pork. Can't get no work to do nowhere. But, mister, if you was askin' me does that Jim need charity, I'd say, No, he shore don't!"

The past decade has proved beyond any possibility of doubt that rural Americans of today can endure privations as bitter and demanding as those endured by their pioneering forefathers. Actually, throughout millions of square miles of rural America famine has followed famine. More than seven thousand town or village banks have tumbled into oblivion. Time and time again country people have met winter penniless or without credit, and with lean larders. Time and time again markets for timber and for farm produce have failed. Work animals have starved. Hard times have turned to bitter hard. Hickory ashes have served for baking soda, parched wheat for coffee.

I have encountered first families of the hill country who have pulled through long lean winters with lendings of corn meal and salt pork advanced by poor neighbors who, speaking economically, have not had their heads above water in a quarter century. Here is a typical instance:

An aged spinster down on Hazel Creek had bought a milk cow on credit from a townsman, the terms stipulating that she was to pay \$3 a month for fifteen months, and acquire ownership of the cow on completion of the payments.

But hard times came. The purchaser paid until the last month and then she could pay no more, for she was without money and with few provisions save for the cow on which she depended for milk and half a dozen hens which supplied eggs for her scanty table.

The townsman demanded forfeiture of the cow. The poor woman in desperation played her last card. She tramped eight miles back to her home, caught up all her hens, tied their feet with benevolent flannel strings, carried them into town and sold them to the store-keeper. At the current range of starvation prices the six fat hens brought \$2.88. The storekeeper contributed the missing twelve cents and the debtor saved her cow.

Before incubation of the WPA, during the desperate drought-famine winter of 1930-1931 the American Red Cross provided emergency ration issues for hundreds of thousands of sorely stricken farm families in 21 states, with a maximum dependency list of 600,000 people in the one state of Arkansas.

Here is a typical Red Cross ration dole, which kept alive the hungering for \$1.38 per capita per month:

25 pounds of meal	\$.75
48 pounds of flour	1.25
25 pounds of pinto beans	1.00
2 gallons of molasses	1.00
10 pounds of lard compound	1.00
1½ bushels of potatoes	1.50
salt .....	.10
1 package of soda .....	.05
1 can of baking powder .....	.25
Total ration for family of five for one month	\$6.90

Speaking comparatively, that was a princely fare. Tens of thousands of rural citizens of these United States skimped through that winter on less.

Weather has been dramatically unkind to Arkansas. In 1927 a sequence of disastrous floods wrought damage estimated at \$200,000,-

ooo. The two succeeding years brought damaging drought to various portions of the state. With the coming of a devastating drought in 1930, Arkansas became the geographic center of the first spectacular drought of our generation, and scene of the first agrarian food riot in recorded American history.

During 1930 the value of the state's great economic stand-by, the cotton crop, was less than a third its 1929 value. The No. 2 resource, timber, was lacking a market. Then in November there came a gloomy Monday when 66 banks of the state, members of a wavy chain, tumbled temporarily. Before the year was finished 40 more rural banks were caught in the undertow.

Then the Red Cross swung into action, and within a month its activities had spread to every one of the seventy-five counties.

Beginning in early January a "self-sufficiency" farm campaign was launched in every county of the state by the then competent agricultural extension service of the University of Arkansas. This state-wide "live-at-home program" included the following "farm commandments," which have perhaps never been improved upon:

1. To raise grain and hay sufficient to feed all livestock during the coming year.
2. To produce enough meat to supply the family's need.
3. Let every farm have at least one milk cow.
4. To keep at least thirty laying hens on every farm.
5. To provide health insurance by means of a farm garden.
6. To rebuild soil fertility by planting not less than one-third of cotton and corn acreage to legumes and pasture crops.
7. To reduce tilled acreage and to apply the surplus of labor to terracing and draining.
8. To improve farm lawns by planting flowers, trees, and shrubs.
9. To plant small orchards of a size to supply the family's need.
10. To keep a budget, and as far as possible, to buy within the family's income budget.

The advent of this great drought was entirely typical of the contemporary ways of agrarian famine. For famine came upon Arkansas not as a sudden and spectacular catastrophe, but rather as a slow, blighting plague. Until the winter was well under way even the best informed of the state leaders were lacking in any competent estimate of the approaching tragedy.

None were more completely surprised at the extent and intensity of the destitution than were the Arkansans themselves. For weeks townspeople were generally uninformed as to the extent of the suffering in the immediate countryside. In addition to millions of dollars' worth of Red Cross donations, foodstuffs were contributed without charge from thirty-two states of the nation—a total of 560 carloads, more than 18,000 tons. Drug companies gave free medicines. Railroads gave free transportation of supplies. Boundaries and prejudices were splendidly forgotten. In time another spring-time blew new life into a vast commonwealth of farms. The first widespread famine directly incident to drought was overcome by a spontaneous frontier-style charity. But the past ten years have demonstrated that the cushion of neighborly charity, however admirable and however folkishly American, is not sufficient to absorb the recurring and battering shocks of repetitious droughts.

In the Great Plains and other recurrent drought areas, it seems definitely possible to shape and to prove a husbandry of drought defense. In other farming sections in which droughts occur at unpredictable intervals, yet with stubborn repetition—such as the Midwest, the Pacific West, the Southwest, the deep South, the Southeast, and the Middle Atlantic states—diversification of crops, spread of agricultural risks, carefully studied and well-experimented irrigation methods, increase of accent on grasses, legumes, and other water-conserving crops, and a fundamental husbandry wherein stored surpluses can be common to all farmsteads, are among the more feasible sedatives to drought losses. In habituated dry lands, drought remedies, by gradual evolution, may be preventive as well as curative. In areas of occasional drought, which include more than nine-tenths of our land surface, drought doctorings can be little more than temporary sedatives. Drought hazards are eternal. Drought liabilities are tremendous. In all agrarian history no drought-doctoring economy has stood the tests of hard times and sore needs so many centuries as the Josephian ever-normal granary—which deliberately exhorts the planting and planning of crop surpluses and methodical saving of harvests of fat years to meet needs of inevitable lean years.

13

POVERTY WITH PLENTY

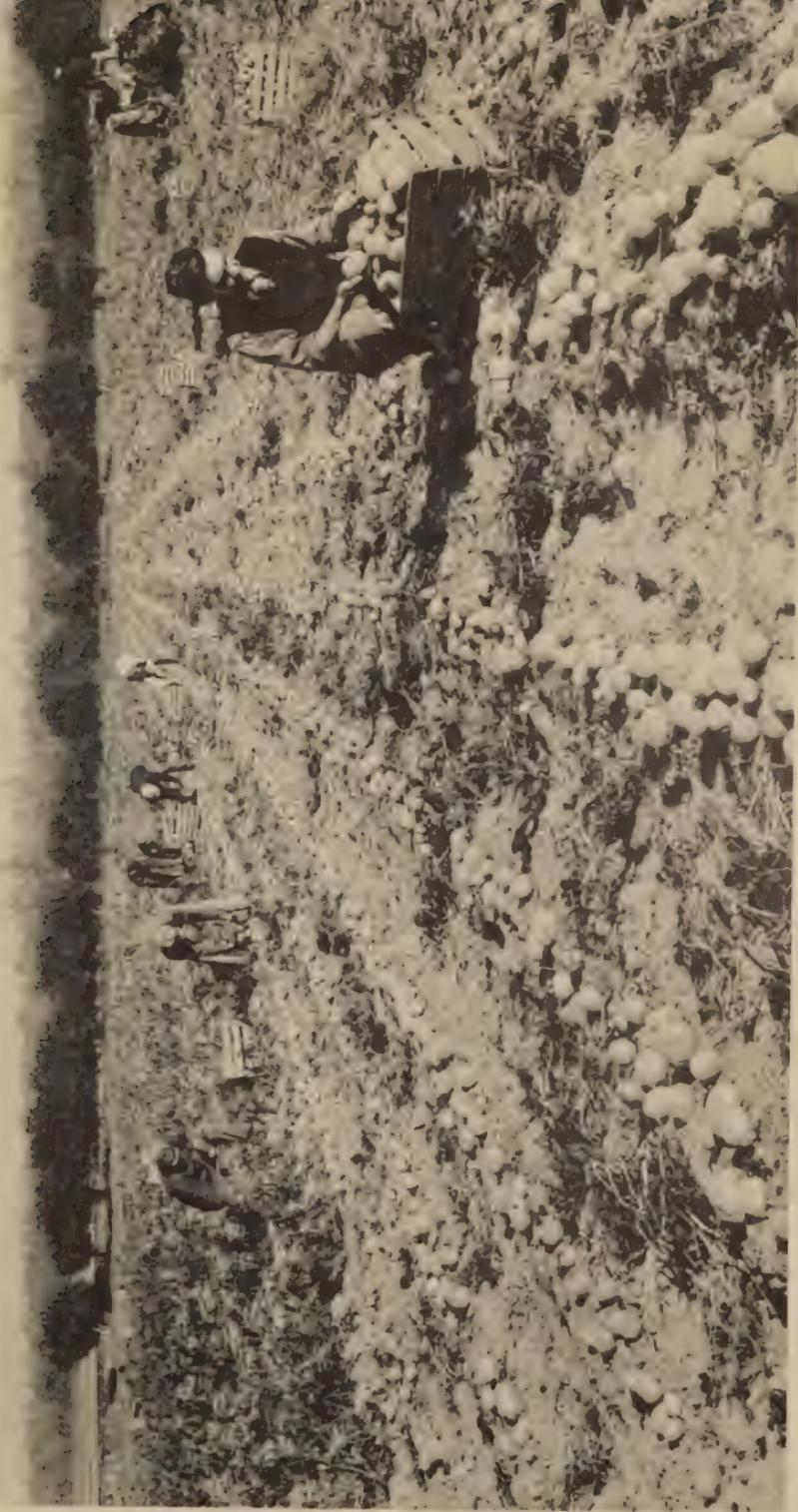
AROOSTOOK is a new America to the far northeast. It snuggles close to the New Brunswick frontier, separating maritime New Brunswick from inland Quebec. It is part of Maine, a whopper county with boundaries which include about 4,250,000 acres, almost the size of the commonwealth of Massachusetts.

About one-tenth of Aroostook land is in cultivation. This tenth makes up the potato empire, the greatest concentration of high-yield potato land in all the world. It is land that keeps on growing potatoes at the rate of a packed carload every ten minutes, day and night, from May to October.

Aroostook is a miniature world of many people: pioneering Yankees, including wilderness fighters, preachers, teachers, and peddlers; cautious territorial British who held small farms in New Brunswick and had only to push across the St. John River to acquire more and richer land; soldiers and deserters from marauding armies; the Norman French, or Acadians, evicted from Nova Scotia and lower New Brunswick by the wrath of British politics; Canadian French from Quebec who came to labor in potato fields; immigrant Italians who came to build first railroads, and other drifters all now mingled into a new, amazing, and profoundly insolvent America.

Unlike most of Maine, Aroostook is not an "atmosphere" prop where painters are painting and authors are authoring and publishers are conspiring and hot-dog stands are hot-dogging and tourists are touring. It is not the Maine wherein only the riffraff works; wherein sleepy streets are studded with mansions built within sight of brine by aging sea captains, who lived in palaces and magnifi-

HARVESTING THE AROOSTOOK CROP



Iris Woolcock

PLANE DUSTING POTATO PLANTS



cent recollections until time came to stake imposing granite monuments in the more exclusive village cemeteries. Aroostook is away from the castes and snobberies of the sea. It seems as inland as Indiana. It is cleanly free of the fading aristocracies of the resort fronts; the summer estates guarded by high hedges so that neighbors and other *hoi polloi* may not be too much inclined to gawp. A gawper in Aroostook is damned well welcome to gawp. And a potato farmer is not afraid to encourage his sons to become potato farmers.

To enter Aroostook from the south one must travel through a great partitioning of forest lands; mile after mile of tangled swamps and cutover sprucelands punctuated with tree-tufted hillocks. Occasional signs denote the six-mile-square townships where people do not live.

After tedious hours the forests begin to give way to fields, stark green and white-flecked with potatoes in summer blossom, or carpeted with red clover or spread over with golden swaths of wild mustard, foremost weed pest of Aroostook. "With pertaters you got to rotate, a year or two in pertaters, then plant the ground to grass. Load your seed drills with oats and clover and orchard grasses. Oats come first. You mow the crop and by then the clovers are commencin' to come up. Next year you get clover and the year after that you get mixed grasses. Then pertaters again. Also you get mustard. It seeds itself and pesters you halfway to death."

Houses grow larger. Lightning rods become more numerous rising almost in hedgerows from housetops, barn gables, and giant potato storages which are usually even bigger than the barns. Without doubt Aroostook is the ranking lightning-rod country of the United States today. A \$45,000 barn may exhibit \$1,000 invested in lightning rods.

You become increasingly aware of colors, the blossoming fields, the rank greens which arise from dark, rich earth. During much of the year Aroostook skies are gray with rain. When clear they are exceptionally blue and the sunlight seems richly golden. Winters are long and deep with snow. But spring comes suddenly. When the deep snows melt grass is already showing, fresh and green, and skis, snowshoes, and sleighs are abruptly replaced with tractor plows and giant harrows. While snowdrifts wait in fence rows,

potatoes take to earth and autumn-sown grain shows first brave leaves.

Bold warmth of Aroostook landscapes seems to find its way into the homes, barns, sheds, and shops. Large frame dwellings, hit-or-miss Victorian in architecture, are soused with bright-colored paints, yellows, blues, browns, and blood-reds. Red is the standard barn color but the vast, arch-roofed, double-storied potato storages are usually painted white. Home interiors show an affinity for pinks, bright blues and yellows, and for ornate gadgets.

Aroostook towns impress one as great handfuls of the Midwest, lifted the farthest possible distance northeast. They are towns with immensely broad streets, brick and wood shop buildings brightly daubed with paint, cupolas and astonishing towers. Aroostook towns reverberate with tremendous enthusiasms, lusty handshakes, first names, and great expectations. In Presque Isle, dubbed "potato capital of the world," I strolled into the hotel lobby to find myself face to face with a snarling, rearing black bear, properly mounted and stuffed by Courtesy of the Aroostook Fish and Game Club. A cardboard sign offered the following:

*Captured within 4 miles of Presque Isle, Maine
Plenty More, Boys.
Come & Get 'Em.*

I have never seen a more magnificent black bear. I have never felt warmer or blacker fur. I have never seen a healthier set of gums or better appearing teeth. All this had occurred within four miles of the Aroostook metropolis where city streets end in abundant potato fields which lead to the habitat of such magnificent bears, with teeth more beautiful than those of the most glamorously press-agented floosies of Hollywood. It was, and is, a terrific, colossal wow.

I wandered among the farms to inquire of poverty and social planning. My first informant was a railroad executive, a powerful silo-figured individual with a wrinkled face and a mighty mop of white-gray hair.

"Poverty in Aroostook! Poverty on the big farms!" The executive indulged in an affable roar. "Well, maybe you recollect about the Hollywood actor that got poor. They tell me that poor man

was really poor. . . . Why, he was so damned poor that even his maid was poor. Even his butler was poor. Be damned if even his chauffeur wasn't poor too."

The great executive coughed solemnly. "Not to change the subject, but did you ever try eating snails? Never did, huh? Well, first you take a scoopful of snails, leave 'em on wet sand to starve to death. Then when they're starved, you—"

Outside I talked with real yeomen of Aroostook. I soon learned that in manly forwardness Aroostook defies any gospel of scarcity. Its rich earth yields plenty. And plenty is honorable. Aroostook is one of the few farming realms of America wherein soil already rich grows perpetually richer. Twenty-five years ago 300 pounds of commercial fertilizer per acre was a fair yearly application. From that the practical practiced donation of concentrate climbed to 500 pounds, then to 1,000 pounds, to 2,000 pounds, even 3,000 pounds. Recently "double-strength" fertilizers have been introduced, which means that actual additions of soil nutrition has been increased as much as twentyfold during a generation's time. The industry of fertilizer deliberately underwrites a farming gospel of plenty.

With increases in fertilizer and potato tonnages go gains of a more ethereal sort, persistent and recurrent ripples of culture via local musicales, public school glee clubs, "literary" clubs, and the like. One of the leading younger farmers of the county tramped in to talk shop, garbed in a highly appropriate costume of corduroy, heavy leather boots, and blue workshirt thoroughly smudged with tractor grease. He left abruptly to attend a piano recital featuring the first public performance of his nine-year-old daughter, then came back to talk potatoes with complete and sincere zeal.

"Here in Aroostook it's mainly all pertaters. We buy land and borrow money to grow pertaters, then grow pertaters to pay back the money and buy more land. We build big houses and sheds to store pertaters in, then we got to grow a mighty lot of pertaters to fill up the storages. We eat pertaters, work pertaters, thrive and flourish and starve on pertaters. I'm tellin' you, Maine's Aroostook is the best and worst farmin' county in North Ameriky. It gets that way by pertaters and tractors and big-money machines."

Charley Fisher, a potato veteran of Aroostook, was speaking. White potatoes happen to be the No. 1 vegetable crop of this nation, a product of every state. But the one county of Aroostook

grows from a sixth to a third of the nation's total potato supply, far exceeds the yield of any other state and dominates the American potato market most of the time.

In his middle sixties, Charley Fisher stays part of the perennial potato race. He plows early, plants abundantly, pushes horses, tractors, cultivators, and spray rigs from early dawn until past dark, pays the hired help well, feeds them well (potatoes three times daily).

But it is in October, when the big diggings start, that Charley Fisher steps truly into his own. That is the heyday of the Aroostook year, the climaxing heat of the unending potato relay. The big diggings mean momentous work—abetted by transient labor from near and far corners of creation who come by the busload, the flivverload, the buggyload—replete with red berets, bastard French, and plenteous offspring.

The digging day starts early. Tractors sputter and roar before the mechanical burden of automatic potato diggers—sharp-snouted devices that plow into earth, lift out the tubers via endless chain hoists, empty them into field dumps or boxes, clatter on to the next heavy-bearing row. Because of frost hazards the harvesttime must be brief. Therefore, from blurry dawn until steel-blue night Aroostook roads carry caravans of farm wagons and freight trucks crammed with jouncing wooden barrels, the stand-by potato measure—eleven pecks, or 165 pounds, to the barrel.

A good man armed with a sharp hoe can "grabble out" as many as 75 barrels a day. A modern mechanical digger can take out ten times that number. But Charley Fisher feels kindly toward hoe heaving, and even as power diggers wobble up and down his lengthier rows, Charley continues to hire hoemen, indeed he swings away with his own hands, which are gnarled and calloused by almost half a century of the frantic annual diggings.

When a man digs all day he has opportunity to get honestly tired. Then he can stand alone in the frosty twilight, look up at a clear sky, listen to the faraway chugging and rumble of potato trains—long trains a hundred or more cars to the string, snow-white cars, all loaded to the rung with potatoes—for the big towns, Boston, New York, Philadelphia—for the world outside which, so far as Aroostook is concerned, remains a rather remote world.

Speaking as an own son, Charley knows that Aroostook is truly

a world unto itself, a world of distinctive plenty and mammoth potatoes.

"It ain't merely another county in another state. It's a nation of seven thousand damned good pertater farms where the ground averages twice as rich today as it was thirty years ago." Average potato yields are around 480 bushels to the acre, better than four times the national average, twice the Aroostook yield of thirty years ago.

Thus men of Aroostook live in hope, work in frenzy, win handsomely, lose tremendously. Farm incomes of \$100,000 a year are on the records. Yet in Aroostook average mortgage debt has climbed to about \$78 for every tilled acre, which likewise touches a nation-wide high for any similar area of cultivated soil.

Charley Fisher is no stickler for statistics or nation-wide records. He calculates that 20 bushels of potatoes well planted should mean at least 400 bushels harvested; that in the case of potatoes, Aroostook weather gods are Christian gentlemen. But markets are not. When prices flop, a \$100,000 potato crop can swing to a net loss of from \$10,000 to \$25,000.

Speaking as a veteran of big potato winnings and big potato losses Charley has only this to say: "I've been poorer than any beggar. I got no sure guarantee I won't be again. Besides I like poor folks, like to help 'em when I got money—like to be one amongst 'em when I ain't. When folks live from the ground poverty and riches go hand in hand—like eggs with ham."

Charley Fisher is an old man but he belongs to new territory. Until 1851 Aroostook was claimed as part of Britain's New Brunswick. The Park Holland line, surveyed in 1820, re-established United States claim to the territory. Twenty years later our War Department ordered a new survey, dispatched an engineering party made up of two soldiers in uniform, two Negro orderlies, six or seven native guides. Robert E. Lee of Virginia was one of the soldiers.

It was Lee's first trip to this wilderness, and his last. The survey uncovered the Park Holland line, marked the entire east boundary of Maine with intervals of iron stakes, returned to Washington. Provincial officials of New Brunswick showed no intention of recognizing the boundary, but the Lee survey was taken seriously, at

least by Maine. A detachment of Pine Tree militia cut trails through the northeast wilderness to guard Maine boundaries. The British War Ministry promptly ordered in Britain's Sixty-sixth, a light infantry regiment, from the West Indies and a detachment of royal marines to patrol New Brunswick boundaries. The British force took permanent quarters at the mouth of the Tobique River. Seven miles away the American militiamen built a log fort and waited.

That was the Aroostook War, two years of stupid waiting. Three Americans died of smallpox. The British troops suffered bitterly from exposure and scores of them died as a direct result of being moved abruptly from the tropics to a bitter blue-cold Aroostook winter, without issue of woolen clothing to replace the cotton uniforms of the tropics, without overcoats or proper bedding. Thus the British defenders shivered and froze for the glory of a trans-oceanic and extremely absent-minded queen.

The Aroostook War ended without a hostile shot. Britain recognized Maine boundary claims. The troops went home. By formal edict every man, woman, and child living within Aroostook became an American citizen. That was only eighty-five years ago. "Treaty" citizens still live. Maine offered Aroostook land at public sale—for fifty cents an acre. Northbound Yankees, British deserters, trappers, timbermen, famine-fleeing Irish joined in the merry grab. Timber was felled in magnificent extravagance. First settlers planted potatoes in burnt stumpland, harvested first crops of from 700 to 800 bushels an acre, sold potatoes to logging camps.

Housewives learned the expedient of potato starch—how to grate raw potatoes, let the pulp stand in cold water, drain the water for use as final rinsing for Sunday shirts and go-to-meeting dresses. Cheap potatoes and plentiful clean water are the productive ingredients of potato starch. Aroostook had both.

Creekbank starch sheds began to grind. Revolving paddles washed new potatoes in cold water. Churn graters pummeled potatoes to white pulp to be stirred into a final immersion of clean water and poured into wooden vats. Contents settled, the water was drained off and the vats held fat layers of wet starch. This "mortar" was dried in kilns and out came the starch—smooth, snowy powder.

The process found improvements until Aroostook came to produce nine-tenths of all potato starch manufactured in the United States. This climbed to dimensions of a million-dollar industry.

Now little potato starch is produced in the United States. Our trivial consumption is mainly imported.

The Civil War era brought publications into a land new to type letters—the weekly *Portland Transcript*, wrapped in pink paper, the *Farmer's Almanac*, the Bible. Durham cattle came, heavy, big-flanked cows, powerful red bulls and steers for use as oxen. Earth was plenteous. So, too, was isolation. Rivers gave the only inexpensive passageway and timber could be floated.

Thus came the “shingle shavers.” Great white cedars, arbor vitae of Maine woods, grew in Aroostook swamps and lowlands, grew so thickly that antlered moose could scarcely range through the forests. Shingle shavers began felling the trees, producing home-made shingles by unrecorded thousands of bunches, salable at a dollar a bunch.

Charley Fisher grew up during Aroostook shingling days. His father pioneered as a shaver, discovered that shingle making was a money-making alibi for clearing more land. Cleared land invited planting of more and more potatoes—one of the few crops well suited to Aroostook's cold wet summers. Corn is uncertain. Weevils molest the wheat. The land is beyond growing range of most commercial fruits.

In the late eighties railroading came to Aroostook, first a spur line of the Canadian Pacific, then the main line of the Bangor & Aroostook, which made belated connection with trunk lines leading to the great eastern market cities. Railroads were final and official gun for Aroostook's herculean potato race. At twenty Charley Fisher joined the race. He has stayed with it for forty-seven years.

During these years his beginning potato patch has grown from two acres to about two thousand. He takes due pride in the tranquillity of his household. It is a well-provisioned household, a massive, late-Victorian country house, handsomely furnished, immaculate. Only one maid is on duty to cook for the eight or nine farm hands. Mrs. Fisher does the lion's share of house cleaning, bakes the bread and cake (at least two kinds of cake for every meal), manages the garden and poultry lots, altogether keeps tremendously busy. Speaking as a devoted user of electric refrigerator, vacuum cleaner, electric irons, percolators, washing machine, and various other gadgets of the modern household, she estimates that

even with the best possible mechanics a farm wife still has plenty to do.

Charley Fisher's wife makes no claim to being a typical Aroostook farm wife. She doubts if there is really such a woman. She notes that quite a number of Aroostook wives have gone in for bridge clubs and fancy living, that some have gone through fortunes in a few years, ending the transition in drunken beggary, that many have become spleeny (Aroostook for naggingly ailing), that others appear to be more interested in blooded horses than in homes. But Mrs. Fisher is happy with her place on the potato-racing side lines.

Occasionally, when the mood strikes him, Charley stops to ponder upon the ways of Aroostook people. He speaks in critical neutrality:

"I never been outside enough to tell a great deal about what farm folks are like in other parts of the United States, but judged by the little I've seen and read, I'd say us Aroostook folks has the finance viewpoint more than the farm viewpoint. Up here pertaters get to be money—negotiable paper. I ponder a heap about that. I notice our young folks don't seem nearly so much interested in farmin' as they are in profit makin'."

Besides, there are the peddlers, the salespeople who push into Aroostook from all over creation and back, selling virtually everything from lightning rods to pipe organs and purple guppies. Resident peddlers are an orthodox fixture of the landscape. But when the crop "takes" word goes forth and far and sellers come by the drove and deluge. That is one good reason why rolling black-green Aroostook has more lightning rods to the square mile, more plain and fancy gadgets to the farm home than any other like-sized strip of rural America.

It is the peddlers who do it. And Charley Fisher adds that it is peddlers who have driven many a sober Aroostooker to drink. When Aroostook folks have money, they are the world's easiest to sell to. They crave to lead more plenteous lives. They have no fear of changing money. A potato-racing citizen of Aroostook, Charley Fisher endures a high overhead, which is likewise standard in Aroostook—production costs which total around \$1.50 for an 11-peck barrel of potatoes (when taxes, truckage, and interest are included) or a per acre overhead of around \$75.

With a 10,000-barrel crop at \$4 a man should clear around

\$25,000. But when markets collapse and good potatoes rot at 30 or 40 cents a barrel, which has happened time and time again during the past decade, it is just too bad. Charley hopes no more bottoms will fall out of the potato bucket. For at thirty or forty, a good potato man can score a comeback. But an old man is licked.

"And get this straight. Aroostook ain't a pertater country just for the hell of it. We've tried other crops. We've tried dairy cows. But we're too far from milk markets; five hundred miles to Boston, near seven hundred to New York. With our sky-high freight rates, them distances eat away the profits from cream and butter. We've tried growin' fine horses. But this here is a auto-airplane age. We've tried growin' lettuce—finest you ever see, but it wouldn't sell. Garden peas worked the same way. Hereabouts the set of the sky says grow pertaters. And I grow 'em."

Yet Charley Fisher estimates that unless potato incomes show a marked and continued improvement over the average for the past ten years Aroostook's potato supremacy cannot hold. Bank men are doing considerable wailing over the fact that Aroostook farm indebtedness now totals \$28,000,000, which is \$78, or thereabouts, for every acre under tillage, or about 55 per cent of the total appraised value of all farm real estate. Mortgage debts accumulate some \$1,500,000 interest charges every year.

In the United States annual per capita consumption of potatoes is three and a half bushels a year. When the nation grows more than three and a half bushels per capita Aroostook loses money—and a great deal of it. When the nation grows less than three and a half bushels per capita, the Aroostook crop usually wins.

That is the jinx of three-point-five. God alone can foretell how many carloads, barrelfuls, and bushels of potatoes the nation at large will grow during a given year. That depends on the unpredictables of price, bugs, rainfall, and mortal whimsey.

But the frailest of mortal men can foretell with approximate accuracy the volume of Aroostook's potato crop. There potato acreage and husbandry have reached the stage of patterned formula. Spray routines tend to erase damaging vagaries of bugs and rust. Summer rainfall and weather are amazingly uniform, and tailor-made for potatoes. And potato stays king.

As years and seasons pass, Aroostook potato acreage remains at an almost level keel of 135,000, for a yield ranging from 45,000,000

to 50,000,000 bushels. Though the ultimate destinies of the crop may depend on potato statistics, Aroostook talk is not statistical talk. It is big, plain potato talk. Charley Fisher sees no real reason why it shouldn't be.

"Our schools, churches and banks, stores, shops and homes—they're all built on pertaters. If pertaters fail us we're lost. We're licked. We're shipwrecked." The tenseness departed from his lips. "We're blotto—till we can get planted and harvested another pertater crop."

July 25, 1936, was a gala day in Aroostook County. That particular morning saw the introduction of potato dusting by airplane. Three big growers, Woodman, Smith, and Parkhurst, in the Presque Isle area, one of the greatest concentration of high-production potato lands in the country, or in the world, took the dip simultaneously. Edwin Parkhurst is the grandson of Elisha E. Parkhurst, the first important grower in the United States to make practical use of Bordeaux mixture as a potato spray.

True to Aroostook tradition the workday started early—at about six in the morning. Two planes equipped with powder ejectors were parked in one of Mr. Woodman's potato fields. As soon as the rainy-as-usual Aroostook sky gave light enough for a safe take-off, two youthful pilots in faded khaki climbed into their cockpits, set propellers, charged forward on a slippery bed of mown alfalfa.

The planes circled, lifted to gain speed, then dipped low over rank potato fields, and flying fast at a height of about twenty feet "shot the works." Fields began to grow white with lime vitriol powder. Several shots missed their mark, fence rows and adjoining spruce groves were likewise fringed with white. But in less than an hour, before any dew was lost, each plane had dusted about a hundred acres of potatoes at a sample cost of about 30 cents an acre.

Farm hands jabbered in Canadian French. Old farmers stroked their chins and looked on in silence. Plainly the experiment was far from a bull's-eye success. Though time was saved, material was wasted. In any case, I believe every onlooker realized that the experiment represented one more step in a great and forward agriculture, a new heat in the apparently endless potato race.

Yet potato consumption in the United States decreases. Nowadays

our domestic demand seems satisfied with a potato growth of around 3,000,000 acres, and it does not always accept that many graciously or profitably. The United States crop is less than 6 per cent of the world crop. Europe grows almost 90 per cent of all white potatoes. Germany alone grows five times as many as we do; France 60 per cent more than we do. Aroostook potato men agree that this country is notably undersold on white potatoes. As a crop the potato does best as a food for man. The best way to encourage better consumption is to grow better potatoes, to get them on retail shelves in better condition and with more dependable regularity. This means higher production overhead; more money spent for fertilizers; greater pains and expense in digging, shipping, and storing. It also means more punctual planting and harvesting, better cultivation, better selection and care of seed.

Aroostook growers know about all they need to know about potato growing. But nobody knows all he needs to know about potato marketing. That is the incessant potato puzzle. The selling cycle begins in March, when far southern growers start shipping early potatoes to eastern markets at prices usually fancy—at least to the consumer. By early April, or sooner, the Arizona and southern California early crops start to market. These extra-early diggings are too slight ever to saturate the larger markets. The heavy supply continues to come from storages of old potatoes. But shipments of early diggings continue to gain. By late April or early May harvests from Louisiana, Georgia, southern Arkansas, and the Carolinas are finding their way to eastern and midwestern markets, with the big California harvest edging in from the Far West.

By the first of June new potatoes and the old crop are running neck and neck. By July the old crop is pretty generally used up, and harvests from New Jersey, California, Maryland, Missouri, and Kansas take the lead. By early August the New Jersey crop usually holds the lead, with beginning competition from Idaho, Minnesota, and the Far West. But Minnesota and Wisconsin potatoes develop more slowly and usually pick September as their biggest market month. Meanwhile the great Idaho crop lunges ahead in late August and early September—with competition not always too friendly from Colorado, Utah, and Oregon.

Middle September finds the Minnesota crop well out in the open, with hard, fleet competition from the big Pennsylvania crop. Penn-

sylvania has an advantage of stride, because most of her crop can be used by her own great cities without necessitating any large amount of long haulage. The same is true of New York State, where the major part of the potato crop is harvested within fifty miles of a great market. That is the usual running order; the approximate setup for the nation-wide potato race—rather than the race itself. Maine and Aroostook remain the leader.

The scene was an overland bus amid the sand, rattlesnakes, and tourist bait of balmy Florida. One traveling man asked of another traveling man, "How's business?"

The other traveling man answered, "Mine is lousy." Whereupon the first traveling man said, "Hell, so is mine!"

After minor bouncings the first traveling man began again. "They tell me business is bad most ever'where except in a place way the hell up in Maine. Name's A-rooster—"

"Aroostook," the second traveling man corrected.

"Anyway, in Sunday's paper I seen a piece that say one farmer up there raised and sold a potato crop for three hundred thousand dollars. Jest a damned farmer! W'y—" there was a long pause for purposes of emphasis—"I say that Arooster County is the place for a man to go. Because if a damned farmer can make three hundred thousand dollars a year, any damned fool ought to make fifty thousand!"

The Aroostooker who had sold his maximum potato crop for \$300,000 was Walter A. Christie of Presque Isle, intermittently the biggest potato grower of his county and considerably publicized as the "biggest farmer" in the United States.

I found America's biggest farmer loitering in front of an enormous potato storage house which bears a giant sign "W. A. Christie, Seed Potatoes and Table Stock." The biggest farmer was a modest, elderly man, dressed rather smartly in a business suit, stiff collar, blue tie, a diamond stickpin. His face was sun reddened, his blue eyes inquisitive, his features expressive of benevolent and perpetual surprise.

Like many other Aroostook farmers, Walter Christie lives in town, in a mildly elaborate house, considerably varnished within and with many solemnly ticking clocks.

Potato farming has been his life. A Canadian by birth he came to Aroostook in his teens to work as a farm hired man.

"We worked hosses, then, big stout hosses. Then you worked behind hosses and raised the gasoline straight from your own ground . . . no gasoline stink. No oil and brake bands and motor parts to buy."

The fireplace spluttered sleepily. Walter Christie talked of old times. After he had worked as a farm hand for a few years, ownership of the big farm broke apart and a disgruntled son-in-law offered to sell a hundred acres to the hard-working farm hand from New Brunswick. Walter explained that he had no money. The son-in-law told him to pay for the land out of crop.

So Walter Christie "bought" the farm, borrowed a team, and planted potatoes. That was thirty-five years ago. Walter has stayed with the crop and his life has been a continuing saga of greater plantings. At times he has been pretty completely on top of the world. At other times he has been buried by avalanches of collapsed markets or unsalable harvests. Time and time again he has scrambled out, and helped others to scramble out. That is the brotherhood of the big potato game. It is a game of high glides, spills and backdrops, a game in which few men have won without the help of neighbors.

Walter Christie has taken careful account of this truth. He also dwells on the place of man power and horse power in agriculture. Thus he seeks out good workmen, pays them high average Aroostook wages (the highest farm wages in the United States today), and supplies them with draft horses and new tractors.

His four potato farms support the services of twenty-five teams and eight tractors. Though Aroostook is one of the greatest tractor realms in the country, or in the world, use of traction equipment has not materially reduced demand for labor.

Walter Christie is past the age of earning. But he still makes the rounds of the farms and fields, sees that all horses are well fed and well stalled, and that his men have good fare and good tools. When evening comes Walter Christie spends considerable time sitting alone before his fire.

In Aroostook the future as well as the past provides plenty of occasion for quiet meditation. He has grown up with a frontier. Time and time again he has watched south winds blow the breath

of life into his vast checkerboarding of fields. Time and time again he has watched harvested fields yield themselves to winter snows. And through the marathon of years Walter Christie remains certain that it is the "pertaters" that count.

During the years between 1929 and 1936 potato prices were extremely bad. Those years dealt colossal losses to Aroostook, enforced an era of relatively hard times, and despite ever-growing yields as we have already had occasion to see, piled up a potato farm indebtedness of at least \$28,000,000; perhaps 55 per cent of the total value of all farm real estate in Aroostook. Aroostook income from potatoes has lately ranged from \$8,000,000 to \$50,000,000 a year, with growers' prices hopping from 80 cents to \$10 a barrel.

Strangely enough, Aroostook's potato depressions and intervals of potato prosperity are but vaguely related to national "prosperity" trends. Also the necessary cash outlay for growing and harvesting an acre of potatoes remains highly stationary; about \$70 an acre—for 130,000 acres. Actual cash losses of as high as \$65 an acre on a single crop are a matter of secure record.

Yet the actual agriculture of Aroostook is good. Compared with American farming at large it is superior. It is amazingly efficient. Aroostook holds rich fields, and on those fields work great farmers.

The great faults of Aroostook remain faults of marketing and transportation. These are its premier extravagances, and alas! the price of bad selling and extravagant shipping must be paid by either the grower or the final consumer—usually by both.

As a rule 350 individual dealers and shippers take part in selling the 50,000 to 60,000 carloads of potatoes shipped annually from Aroostook. Carloads are billed with drafts payable on insured delivery. Large brokerage concerns with national distributing organizations operated on a brokerage basis, selling carlots for local dealers and growers. Such diverse profiting can and does incur almost numberless profits, pays stupendous dividends to a few, encourages extravagant charges, allows railroads to suck unendingly at potato profits.

The backdrop of depression introduced into Aroostook the first producers' co-operative for marketing the great crop. The first co-operative now sells 2,500 carloads of potatoes yearly, about 6 per cent of the entire crop, and with these sales the home co-operative

has begun to operate potato supply and fertilizer pools, which are functioning quite well. Thus the first producers' co-operative takes a first step toward becoming a first consumers' co-operative.

Aroostook still leads the potato race, with all advantages derivable from rich soil, superb mechanization, and a great farming tradition. Offsetting these it has serious remoteness of location. It has but one efficient potato road to the world outside. That road, unfortunately, is a railroad, and just one railroad which has bequeathed itself a virtual monopoly on a bulky and weighty crop which grows from 500 to 1,000 miles from deciding markets.

The certain potato money has come to be railroad money. Almost literally railroad transportation has built the potato from a casual garden vegetable to a foremost food; broadened its growing range from experimental plantings along the Atlantic seaboard to a staple crop for every state of the Union. For all the potato crop railroads have decided lines and points of distributions. That is, railroad freight rates decree that the vast bulk of the Aroostook crop can never go far west of Albany or far south of Baltimore; that the crop from Idaho and the mountain West can rarely hold a dominant position east of Chicago; that attempts on the part of any one producing section to defy freight-rate boundaries usually result in ruinous losses.

Even in a fabulous age of trucks and highway traffic, Aroostook potatoes continue to go forth on the rails, and the ride is forever costly, rarely less than \$10,000,000 in freight for the one county, sometimes \$15,000,000.

From 55 to 80 per cent of the money which you and I pay for potatoes is in reality transportation and commission money.

Shipping costs regularly account for more than 40 per cent of the spread of potato prices between Aroostook and Boston, the nearest important market. Again taking 1935 as a typical year, Boston jobber prices allowed Aroostook farmers 28.9 cents per hundredweight for their potatoes, allowed 40.7 cents for transportation, sacks, and loading costs. That is, the growers received slightly less than a third of the wholesale price; the railroads, 46.51 per cent; loading, brokerage, and miscellaneous costs, 20.46 per cent.

Thus Aroostook becomes an ideal arena for studying fantastic wastes of modern distribution. It demonstrates monopoly at its worst; a capitalism that has grown grotesquely unsocial.

What to do about it? That is the age-old rub. Railroads are still a vital agent in potato production—if we define production as ending only when the crop is stowed away in the market basket of the shopping housewife or placed on the family table.

Repeatedly Aroostook growers have “bucked” the railroads always with meager results. The railroad has sold some of its stocks to farmers. At heart the farmer is a man of capital. He may be a common laborer during work hours. But he also is an owner, with sympathies of property and profits. Such is his way of life.

Aroostook farmers damn railroad greed. Aroostook newspapers frequently drip with editorial damnation of the “ruthless monster of rails.” One after another Aroostook farmers, brokers, and bankers appeal to the state legislature. In turn legislative investigators appeal to the Interstate Commerce Commission, the President of the United States, the Great White Father, to human justice, to duty, honor, and country, one for all and all for one, or what have you.

But railroads can appeal, too. Railroad lawyers can match every complaining word with a condoning word at least twice as long. They, too, can and do appeal to the great abstractions. They can orate, maintain lobbies at any and every state capital. They can support a perennial lobby convention at Washington, D. C. They can produce reams of statistics which no man can answer and few men can understand. They do. And they keep a profitable throat-hold on great Aroostook, where potato is king and railroad stock is lord high exchequer.

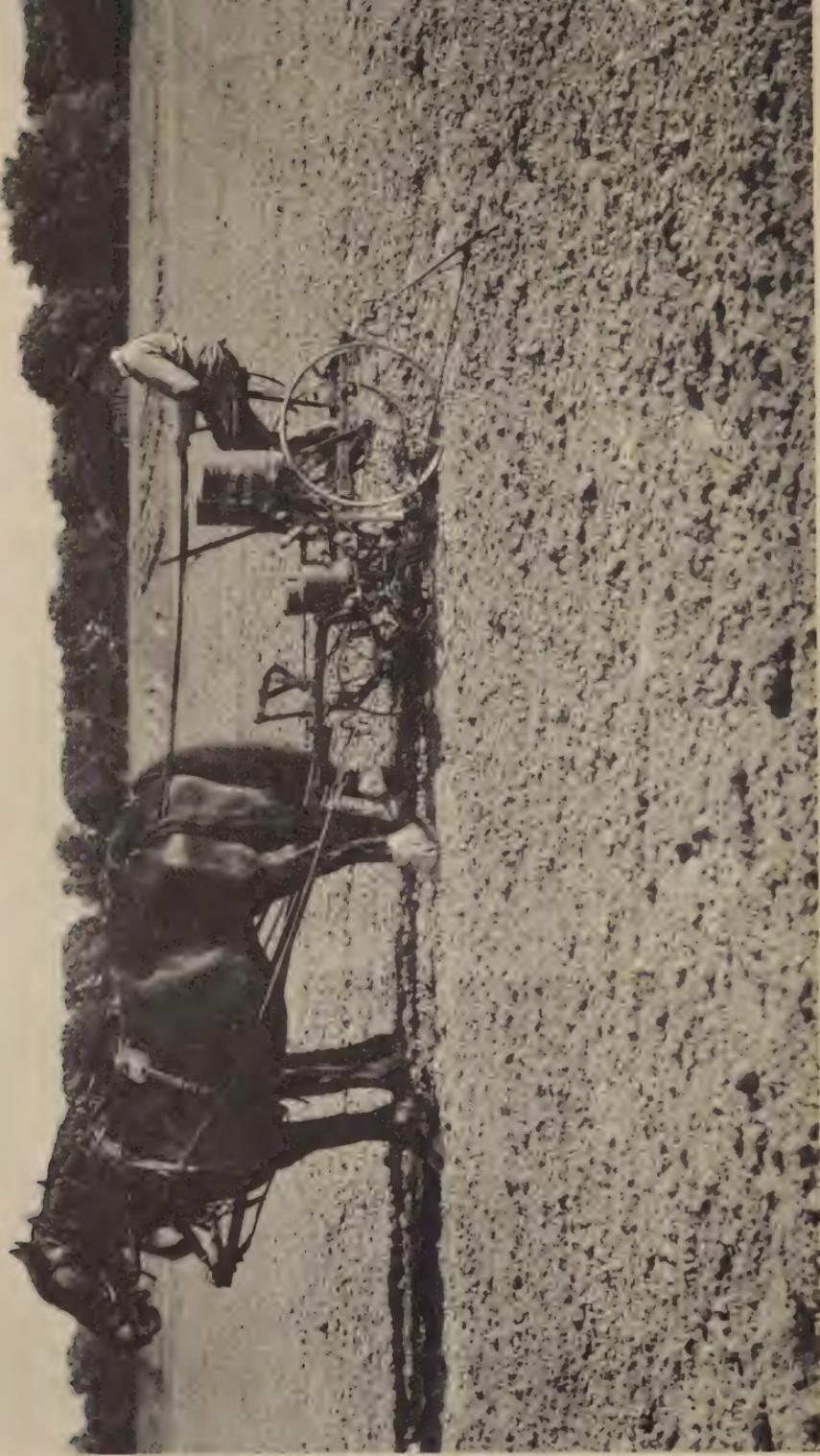
But all this does not alter the situation, nor does it lend security to the future destinies of Aroostook.

Co-operation is the one key word of defense. And co-operation is not indigenous to the nature of Aroostook farmers. It is the age-old story of the corporation against the independent individual.

But the fact remains that co-operative buying and selling have already come into Aroostook, with results which are creditable if not outstanding. There is now the hope for such an institution as a home co-operative railroad. But there is definite possibility for co-operative establishment and equipment of an ocean port which may prove itself a defense against railway combines. With this possibility go additional possibilities for co-operative trucking organizations and for road and highway development which may make such trucking comparatively efficient.



SPRAYING BY TRACTOR IN AROOSTOOK



PLANTING CORN

Beginning with its 1937 harvest, Aroostook began a great campaign for market research and national advertising of Maine potatoes, derivable from an "industry tax" requested and paid by potato growers. The tax is one cent per barrel on the export crop. The state assessor collects the tax from all shippers of potatoes, who deduct the amount from payment to farmers. All shippers must be licensed by the state of Maine. About 20 per cent of the collection is earmarked for market research, the rest for national advertising and selling costs.

All potatoes thus sold must be inspected and approved by the state department of agriculture. Aroostook's newest venture in going to market thus employs a state government as co-ordinating agent for private farming enterprise. In general such government-and-farming relationships have built for subsidies, chargeable to the consumer, toward gang politics and political collusions. But the Maine-Aroostook venture seeks to build a solid marketing front of farm crops harvested within a given area—to the end of hoisting national demand.

This is a striving in contrast and in youth. Much of rural America has grown old in soil, topography, and yeoman's opinion. Many of our present farming realms were shaped and molded by hands long since turned to dust.

Aroostook holds the indigenous genius of youth; of openhanded opportunism. It has known but two or three farming generations. Sons, grandsons, and hired men of first land-takers still make up the controlling yeomanry of farms and potatoes.

Soil and climate have responded to the might of a dominating crop. The brief history of Aroostook stays written on the face of productive fields, in the maws and caverns of huge potato storages, by long spans of potato cars and trains, in the ledgers and daybooks of market sheds and brokerage houses.

This essay on Aroostook is presented merely as an agrarian case study, believed to be of outstanding current significance. I hardly dare forecast Aroostook's agricultural future. It is hard to say which can present the mightiest resistance; the mighty forests and remote wildernesses of yesterday or the vast network of competition today. Whatever the outcome, it is good to see the men of Aroostook still on the march.

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STEPSONS OF THE CORN BELT

A GREEN and golden dawn and I was getting into the corn belt. Villagers had shed coats. Morning wind brought in the odors of rich black earth. I had come in through Ohio, following the Ohio River, which was muddy and sullen from floods. Adjoining hills, destitute of timber and abandoned by farmers, added to the river's mud content with minor landslides and caving banks. Occasional fields of wheat and corn were outacred at least five to one by unused fields.

In front of the Wide Awake Restaurant in an astonishingly sleepy village of southern Ohio I met a young man in overalls that were convincingly earthy. He was whistling an indefinite tune as he whittled a whole shingle into slivers of shingle. I inquired of him the how of agriculture in those parts.

"Not an awful lot's being done—about half normal, I guess. Folks ain't so work-brittle this year. I'm not a farmer myself. My father and all my folks are, but now they've been pretty well squeezed out by taxes and borrowin'. I've been doin' town chores, washin' autos, makin' gardens, and such as that. Soon as corn and hogs get back to where I can make a livin', I'll go back to farmin'."

He spoke without any particular resentment and, true to his sort, expressed no belief that the prevailing orders are due a revolutionary change. He voiced the notion, however, that some of the "big pertaters up east," who held most of the corn belt under mortgage, are destined to find themselves grasping the traditional burlap.

His next comment carried a ring of optimism:

"There's Roosevelt, and there's the movie house up the next block. It used to cost a quarter to see a show, and the house went just

about empty. Now it's down to fifteen cents and nearly everybody goes."

At a river town I talked with a farmer who had eighty acres he wanted to get in corn. But he allowed that every time a farmer goes out to plant the heavens drench him with rain, that the Washington boys are trying to raise farm prices by reducing crops, and that it looks as if the weather clerk had become one of Franklin Roosevelt's brain trusters.

At the next county-seat town, I talked with a government agricultural agent, who deliberately grinned in speaking of the Agricultural Adjustment Administration:

"This modern farm education, so called—the stuff the agricultural college teaches—is still based on the old salve of increased production and 'living standards'—on the outgrown theory that increased tons of crops mean increased dollars of profit, which is about as near the opposite of truth as anything can be. Just now the federal government is trying to go two ways at once—keeping up extension services and agricultural colleges to teach people how to grow more crops and spend more money, while it practices domestic allotment, which urges them to grow less and live on less. That's like leaving a sick man with an ice bag on his head and a hot-water bottle on his feet."

I interviewed a country preacher in Adair County, home of Secretary of Agriculture Henry A. Wallace. The preacher spoke of the increased spiritual strength that depression had brought to his people, contending that mind and morals, as well as spirits, are built in adversity and broken down through abundance.

"Our farm people are beginning to think for themselves at last, to stand more squarely for what they believe to be right. Whatever else happens, they aren't going to be trimmed and tricked by moneylenders like they have been in the past. And they aren't buffaloed by farm codes written by mortgage investors and swivel-chair economists from New York City.

"Our farm people are beginning to think for themselves—at last, to stand more squarely for what they believe right. Adversities have brought new ties of brotherhood—along with strength of numbers. Our young people are coming back to the land now, from colleges and cities. That's a precious resource in these times, when youth gives the only sure ground for strength and hope."

He spoke of revolutionary prospects:

"In a flare of temper, a few of our farmers burn railroad bridges, or dump milk out of trucks, or swat deputy sheriffs. Those may be symptoms of revolution, but they aren't necessarily the start of revolution, although they might lead to a situation where revolution was unavoidable.

"But just now we are fighting a system of economic thought more than anything else. Our people have been sold on a standard-of-living myth that was never sound, and can never be supported. The myth is pretty well finished, but its maladies linger on.

"Anyway, this is America *here*, the spring that starts the river of national life. During the past fifteen years paper prosperity and phony valuations have crowded the river with muddy waters, but now that the flood of high finance is finished, the river's got to depend on its true source."

In rural Illinois, old Doc Collyer, president of the Farmers' Protective Association, proffered much the same sentiment. He pointed out the obvious truth that farmers, as average intelligent citizens, have begun to appreciate their true power and importance in the national life; that as a people they are as far-spread and unblockable as the very ocean; finally that American history, like numerous other histories, has proved that revolutions are usually agrarian in birth, man power, and dynamite.

As he talked I recalled having attended a "five-and-ten" farm auction, in this same Illinois, during the bleak winter of 1933. The local court had ordered a landowning farmer to be sold out—all his worldly goods jeopardized to satisfy a mortgage claim of a little more than \$900. The creditor, a farm-loan agency, operated by a New York insurance company, a heavy borrower from the RFC but nonetheless deaf to the President's plea for credit leniency, had refused to extend time or terms.

The creditor's attorney, newly out of law school, appeared dapper and nervous. A deputy sheriff was on hand to serve as auctioneer. Sixty or seventy farmers were about, dressed for work; grim, weathered men, shabby and gnarled with labor, waiting in the forlorn yard that was garnished with a long line of mud-spattered flivvers.

The deputy stepped to the front porch, began a preamble about

law and order, and the duties of a peace-abiding citizen. Nobody said anything. I could not locate the debtor, but supposed he was somewhere in the crowd. A fat, whisky-faced assistant deputy, with a silver star, came around the corner leading a Jersey cow.

"A good cow, gents. Well-shaped and a good milker. How much am I bid? Who'll say thirty dollars? Who'll say twenty-five? What am I bid?"

A weazened little farmer shrilled, "Ten cents!" The auctioneer grinned. So did the crowd. But the cow sold for a dime. Three calves brought a nickel; a barnful of corn and hay, a dollar.

The auction lasted fifteen minutes. As well as I could make out, returns totaled around three dollars. The auctioneer, his helper, and the lawyer, the latter very pale, went their ways, and the creditor's belongings were left intact by the neighborly crowd.

It was a thoroughly legal sale, a peaceful burlesque, but a determined one. Had anyone interfered, I believe that he would have stood an excellent chance of being hanged, or at least of being ridden out of town on a rail.

But now the popularity of foreclosure is gradually dimming, and the tactics of the five-and-ten sale are no longer so frequent a protective necessity. What is more impressive, midwestern governors are showing themselves vastly more cautious in the matter of summoning state troops against erstwhile substantial and law-abiding farmers.

The saga of milk wars, for example, showed a definite mellowing of governmental attitude. Early in 1933 I was at Appleton, Wisconsin, a strategic center in the 200-mile stretch of lakeshore country where milk strikers had centered their stand against penny-a-quart milk, which through force of legalized racketeering rises from nine to fifteen cents a quart as it passes through the retentive hands of distributors.

At the village hotel I heard of the milk war's first fatality. The day before at Port Washington, an old farmer named William Dickman, had been run over and killed while attempting to dump the cargo of a milk truck headed for Milwaukee.

And a detachment of 300 national guardsmen had "run several hundred milk farmers out of town," according to the press. The strikers had taunted the soldiery, the guardsmen had splattered them with a gray cloud of tear gas, and the strikers had retreated.

Now a good number of the farmers had strayed back, and were still taunting the soldiery, who from either a military or an ethical standpoint seemed to deserve it.

The militiamen were typical of their calling, town youths who go military for reasons recreational and financial; sloppy, badly drilled, and undisciplined. I asked a khakied youth with protruding teeth and a perpetual grin whether he had ever fired the army rifle. He said that he had not, but that he felt pretty sure he could in case he had to. I asked him if he regarded shooting down civilians as soldierly conduct. He said that he reckoned not, but that babies had a right to milk, and with that sage adage shouldered his rifle and fell in line at the nearest soft-drink parlor.

At Shawano, up the road, the county highway machine shops had been made temporary prison for milk strikers. Here over 150 countrymen were herded together and menaced by a battery of four machine guns. The strikers sprawled on a straw-littered cement floor, or lounged against grease-stained walls, a rather typical assortment of farmers and farm hands. I asked a national guard officer the specific reason for the incarceration. The captain lit a cigarette and yawned.

"Just keepin' 'em here to cool a spell. These boys have all been took in for blockin' highways. I doubt if the attorney general forwards any prosecutions. When things cool down a bit, we'll turn 'em loose." He added appraisingly, "We aren't in for any bloodshed. This squall will be over in a few days."

Just as the corn belt is the productive center of American agriculture, so is it the great center of farm debt and misevaluations of land. Sixty per cent of the country's total of farm mortgage debt is centered in the twelve North Central states, and almost 70 per cent of all incidental farm indebtedness is centered in the same area. The section is expected to pay almost \$500,000,000 yearly in farm debt interest. The increase in farm incomes that might be realized from restoring crop prices to a prewar level would barely cover interest charges on debts assumed during a now-dead era of fantastic speculation.

In November, 1933, the Secretary of Agriculture had begun his "redemption" tour of the Midwest, delivering plainly spoken ulti-

atum that his administration stands for a just deal for the just farmer; that he knew specifically that agriculture is improving; that the government has no house to offer the bucolic "hell-raiser."

In his Des Moines address the Secretary said:

"Instead of sliding down the hill farther, we have turned around and are climbing back up. We know that corn, instead of being worth ten cents on the farm as it was a year ago, is thirty cents on the farm and that the farmer who needs cash can soon get loans of forty-five cents a bushel on the farm. We know that wheat instead of being thirty cents a bushel on the farm, is seventy. We know that hogs, instead of being two dollars a hundred, are around three and a half on the farm. We know that farm prices are rising, and that you and I, through honorable co-operation, can keep them rising."

Addressing the Association of Land Grant Colleges and Universities Wallace made sharp definition of agrarian paths:

"For the first time, we are forced to take steps for the years ahead. Fat land lies idle because, with the surplus of production, there seems no justification now for reclaiming it, and cruelly bad land is being worked by poverty-stricken families, wearing out their lives to no good purpose, carrying themselves, their neighbors and their communities down to the meanest sort of an existence, in a welter of tax delinquency, impossible debt, and deteriorating local institutions."

In 1934 one of the most telling efforts to delve into the real mind of the real farmer of the corn belt was made by the Des Moines (Iowa) *Register-Leader*. That newspaper detailed a staff of reporters to interview about 3,000 farm family heads, both owners and renters.

Asked whether they approve of farm strikes, 14.28 per cent of these farmers answered that they did, 77.15 per cent were opposed, and 8.57 per cent were neutral. Asked whether they favored federal loans on unsold corn crops, 56.86 per cent did, 29.42 per cent were opposed, and 13.27 per cent were neutral.

Throughout my corn belt wanderings during the thirties I have been deeply impressed by the rather astonishing scarcity of "spot news." I have been among farmers most of my life, and as a newspaper reporter I have covered various farm crises—flood, drought,

famine. I therefore know that the American farmer by and large is the citizenry least given to panic.

The National Farm Holiday Association arose as a significant corn belt voice of the early thirties. Claiming substantial membership in at least seventeen states, Milo Reno, veteran farm party organizer-leader, outlined his platform:

"We aren't radicals or Bolsheviks. We are simply dirt farmers and we're asking that the farmers who produce the nation's food be fully assured of production cost. We believe the government's plan to destroy food and reduce crops wicked at a time when millions of hungry men and women walk the roads and streets."

Answering the Secretary of Agriculture's assertion that "Violence, destruction of property and bloodshed solve no problems. You can't get more of the consumer's dollar by keeping milk away from his children, and you certainly can't endear him to the cause of the farmer," Mr. Reno exhorted his membership to open a no-buy, no-sell strike, which has never taken place even in any one considerable area.

The pageant of farm adjustment plays on, intermittently comic, tragic, droll, wistfully idealistic. Sage despots of high finance have stamped and roared without avail. Chieftains in Wallace's headquarters brigade have crossed spears and lances. Harvard economists have been profoundly shocked.

The high command of agriculture reasons:

"When a general is fighting a battle, he does not change his plans without good reason. We see no reason for abandoning our plan which is receiving splendid support from the overwhelming majority of American farmers."

When I was younger and more beautiful, and wrote for a daily newspaper, I was once sent far back into my native Ozarks to report some random turns of backwoods agriculture. As companion I had a pale young egomaniac from Fort Smith, Arkansas. We went into a restaurant which was on the northeast corner of a crossroads store. We ordered scrambled eggs. My companion, not to be overlooked, indulged in several loud and smartish remarks about the probable incubation qualities of the eggs.

The storekeeper rolled up his sleeves and laid aside his frying pan in order to clarify his position. He explained, with a wealth of vivid detail, that he had always served the very best eggs that his hen lot afforded, that customers had never been disappointed, indeed that he consistently pays more heed to the fare of his trade than that of his own family. That said, he viewed my companion askance and made ultimatum:

"So—if you want scrambled eggs, I'll give you scrambled eggs. And if you want trouble, I'll give you trouble."

In a sense this forthright climax typifies the newly born "conservation temper" of the corn belt. Throughout the Midwest the public temper stands more and more in opposition to the agrarian hell-raiser and to the greedy rampages of the do-as-I-damned-well-please type of individualist.

And this is another amazing American phenomenon of today. For, broadly stated, the corn belt was first home and last stronghold of smug, iron-cleated individualism in agriculture. Rural people of early New England found themselves banded into communities, "towns," or sectarian groups for common defense against a vindictive natural environment. Ante-bellum agriculture of the South, particularly the dominating cotton and tobacco plantation systems, was primarily feudal, both in physical establishment and in communal obligation of master to serf, or slave.

But the corn belt was readily discernible as haven for rapid exploitation of land and for the comparatively carefree expediency of grab much quickly. Riotous individualism characterized its planning and first settlement. Regardless of their stalwart graces, their plugging loyalty, and their rather astonishing genius at farming, first sons of the corn belt were rather more than ordinarily inclined toward extreme greed. Scions of many nations and races, they sauntered forward to trade brawn and planning for the magic of real and speculative wealth from land. A great transplanted peasantry toiled like beavers to change rich earth to big barns and ornate home; to dumpy red-brick buildings and cupolaed mansions of timber, and to hoist their sons and daughters into clean-shirted professions—law, medicine, storekeeping, the ministry, and politics. Comparable exploitation by industry, greedy mining and timbering enterprises, joined in the straight-arming dash for new wealth.

There was rudeness, stench, and broadside destruction. There was also mundane, physically satisfying victory. Tall corn grew taller. Little barns grew to big barns. Vernaculars and hands remained rough, but roads and sales talks grew smooth.

Soil has waned and fat harvests have grown thinner. But the "system," the essential bucolic philosophy of the corn belt has changed. Sons of the corn belt are rapidly replaced by stepsons as new generations of Midwesterners seek to live from lands which are strafed by indebtedness and variously depleted by a rapacious overture of speculation and extravagant tillage.

Speaking generally, these stepsons of the corn belt show good evidence of progress in yeomanry. On the whole they are better farmers than their fathers were, even though they are vastly poorer. Though the corn belt of today is littered with abandoned farms, though productive life is dying in millions of smooth acres which were once accommodatingly rich, though hundreds of once-flourishing farm villages and country crossroads have died or have come face to face with extinction, corn belt practice of agriculture touches new and inspiring high marks of efficiency. Livestock is improved. The purebred farm animal has replaced the scrub. Pastures grow richer and greener than ever before. Methodical rotation of crops gains a new status of practicality. Farms are still debt-ridden, lands are still victim of exploitation in credit and investment speculation. Villages, with fifty-seven inhabitants, four traffic lights, and ordinances defining maximum speed limits of twelve miles per hour, attest the decline of rural buying power. But experiment farms and laboratories contribute a mighty grist of new findings—continued improvements in husbandry, formulas and techniques for growing hybrid corn which vastly increases amount and expectation of yield, improved varieties of cereal grains, grasses, and legumes. Tractors putter and roar over sleepy fields, and gaudily painted machines continue in paradoxical substitution for man power.

Gray wolves of poverty skirt the fence rows of productive fields. The corn belt continues poor. But stepsons of the corn belt are toiling to save the life of a great land whereon own sons once acted to impoverish or to destroy.

Part Three

DOING SOMETHING ABOUT IT

15

GOVERNMENT AND "FARM RELIEF"

IN order to make any reasoning appraisal of the federal government's attempt to "aid agriculture" it is highly advisable to notice, at least briefly, the principal highlights of the administration of the Agricultural Adjustment Administration.

From numerous evidences I deduce that the American reading public in general is not well acquainted with the ways and functioning of this unique agency in government. This truth is not at all astonishing. The AAA came into being as just another frenzied ladling of "alphabet soup." Its birth date was May 12, 1933, and before the complex, clumsily worded act could be interpreted, much less enforced, seed had been planted and new crops for that year were already growing.

Initial administration of the law resulted in a most fantastic saga of plowing under crops, of pitiless slaughter of baby pigs, and depletion of livestock herds, together with legalized and rather idiotic sabotage of fields of growing crops. We read of young livestock being slaughtered and thrown into rivers, of stores of grain being burned, of confused Negroes of the cottonlands struggling to make confused mules walk along cotton rows and plow up the "king crop"; how the mules, traditionally whammed for stepping on growing cotton, were suddenly to be cursed and beaten for not stepping on it. A peace-abiding, hard-working yeomanry was about as confused as the cotton-plowing mules. For men, as well as mules, had considered production of needed crops a valid and honorable work, and they had good reason to consider destruction of such crops for motives of bureaucratic bribery an immoral and disgraceful behavior.

Building to the torrential confusion was a rather ill-smelling

smoke screen of politics which straightway engulfed the working arena of the AAA. Politics, alas! still baffle and confuse the panorama of farm "relief." This is regrettable. But in common justice to farmers, bureaucrats, and New Planners alike, the marauding of politics does not disprove the ideology or the possible solvency of the Agricultural Adjustment Administration.

The stated purpose of the AAA is the administration "of certain legislation designed to raise farm income to the level more equitable with non-farm income, to conserve soil resources and to protect generally the interests of producers and consumers of farm products."

The AAA goals are stipulated briefly as follows: "acreage allotment to insure a production of major food, feed and fibre crops adequate to meet domestic, export and reserve requirements; payments to farmers to assist farmers in meeting the costs of practices which prevent the erosion and maintain soil fertility; parity payments to help bridge the gap between market price and parity price for basic farm products; loan on crops stored in the Ever-Normal Granary; and marketing quotas when needed and approved by the growers themselves."

"The AAA farm program is made effective by the co-operation of individual farmers, who by their participation, become members of county associations. For the country as a whole there are more than three thousand such associations, which in turn encompass about the same number of county committees, and more than 24,000 community committees. Committeemen are elected by the members from their own numbers and are in charge of the actual administration of the program locally. [County agricultural agents now employed on a co-operative basis between federal, state and county governments in most agricultural counties of this nation, serve as *ex-officio* referees for the work.] . . .

"Seventy-two per cent, or about 320,693,000 acres of the total crop land of the United States was covered by applications for payments under the 1938 program. Soil building practices were carried out as follows: legumes and legume mixtures (nitrogen restoring crops), permanent pasture, green manure and cover crops were newly seeded on 55,318,000 acres; lime and fertilizers totalling 5,547,000 tons were applied; forest tree practices were utilized on 197,000 acres, and pasture practice on about 3,000,000 acres; protected summer fallow, contour farming, and listing were carried out on 15,990,000 acres, and terracing was utilized to the extent of 392 million linear feet.

"It is estimated that more than five million agricultural producers in all parts of the United States participated in the 1938 AAA program. Conservation payments under the 1938 program totalled \$443,699,000. . . .

"Under the 1939 AAA program the national goal for all soil-depleting crops was set at from 270 to 285 million acres. In arriving at this goal was given to the current supply and demand situation for each crop, the acreage required to supply

domestic and export needs, and adequate reserves, and the requirements of soil conservation.

"National goals for individual crops were set as follows: wheat 55 to 60 million acres; cotton 27 to 29 million acres; corn 94 to 97 million acres; potatoes 3,100,000 acres; rice 850,000 to 880,000 acres; tobacco 1,480,000 to 1,570,000. . . . Under the Department of Agriculture Appropriation Act of for the fiscal year ending June 30, 1940, a sum not to exceed \$599,560,000 was appropriated for payments under the 1939 conservation program. . . .

"In addition to the conservation payments growers who planted within their 1939 acreage allotment of cotton, corn, wheat and rice, received parity or price adjustment payments under provision of the Price Adjustment Act of 1938 which appropriated \$212,000,000 for that purpose.

"This act provided that price adjustment payments should be made in 1939 on the five crops named as basic in the Agricultural Adjustment Act of 1938, if their average farm price was less than 75 percent of parity or the 1914 index. Thus participating cotton growers in 1939 were able to earn conservation payments of 1.8 cents a pound and parity payments of 1.6 cents per pound on their crops; wheat growers could earn 17 cents and 11 cents per bushel in conservation and parity payments respectively; corn growers 9 and 6 cents per bushel; and rice growers 9 to 12 cents per hundred weight. Since the 1938 farm price of each kind of tobacco was above 75 percent of parity, no price adjustment payments were authorized on that crop in 1939. Tobacco producers who complied with the conservation program were eligible to receive from 0.8 cents to 1.26 cents per pound on the normal yield of their production; peanut growers \$3.00 per ton; and potato growers 3 cents per bushel. For farms which had general crop allotments, the rate for 1939 was 99 cents per acre, adjusted for the farm's productivity.

"The Ever-Normal Granary, made possible by the Agricultural Adjustment Act of 1938, was made effective by loans on the 1938 crops, stored surpluses of the commodity serving as collateral. The loans were extended through the Commodity Credit Corporation. The wheat loan on the 1938 crop was the first to be offered to wheat producers, although loans had been made on corn and cotton, as well as on other agricultural commodities, in previous years. Under the 1938 wheat program loans were made on more than 84 million bushels of wheat at farm rates averaging about 60 cents per bushel. A loan program on 1939 wheat, announced at rates ranging from 50 to 80 cents per bushel, got under way at the end of the fiscal year 1939. There loans were extended on wheat stored either on the farms or held in commercial storage.

"As of June 30, 1939, 1939 total corn under the loan amounted to approximately 257 million bushels of which about 227 million bushels were from the 1938 crop. The loan was 57 cents a bushel.

"As of June 30, 1939, total cotton stocks under loan amounted to approximately 11 million bales of the 1934-35, 1937-38, and 1938-39 crops. However, as announced on August 19, 1939, the Commodity Credit Corporation assumed title to the 1934 cotton crop under Government loan, and on September 1, 1939, to the 1937 crop under loan. Under the 1938 cotton loan program loans averaging about 8.85 cents per pound were made on about 4,480,000 bales. On August 1, 1939, the maturity of the 1938 cotton loans was extended one year, to July 31, 1940.

"As authorized by the Agricultural Adjustment Act of 1938, Government loans were also made available on 11 other agricultural commodities produced in 1938, including tobacco, wool, and mohair, turpentine, rosin, peanuts and hops. . . .

"For wheat, beginning in 1939, Federal Crop Insurance provided an auxiliary stabilizing measure. Under this program wheat growers put aside a portion of their

crops as premiums to offset the possible crop failures. The cost of the insurance varies with the risk on the farms and in the county in which the farm is situated. To help stabilize market supplies, the program sets up an insurance reserve of actual wheat on which the insured farmers may draw when they have crop losses.

"To encourage further exports of wheat and to maintain the American producer's share of the world wheat market, the Government initiated an export subsidy program for wheat under which approximately 118 million bushels of wheat and flour have been sold for export as of June 30, 1939.

"The AAA reported the expenditure of \$695,104,483 in the fiscal year 1938-1939. Administrative expenses exclusive of local farm committee were \$19,631,823. Benefit payments included cotton adjustment payments for the 1938 crops, \$121,663,660; soil conservation, \$417,200,239; sugar, \$61,294,887; and 1938 parity payments, \$22,826,045."—Report of the Secretary of Agriculture, January, 1940.

All this comprises an epic of the evolution of a "trend" in national legislation.

The AAA was born of desperation. Its predecessor, the National Farm Board, hazily assembled by President Herbert Hoover and headed by the late Alexander Gegge, chairman of the board of the International Harvester Company (a plush-bottomed beneficiary of farm earnings), had fluked and flopped in appalling failure, leaving the government with unredeemable millions in wheat and cotton, leaving the farming public with the implied plea kindly to refrain from planting full acreage until the industrial capitalists had time and leisure to scrape together a few more billions, at which time all the fair land would again be lovely; two blades of grass would grow instead of one; and life in America would be just one big healthful game of medicine ball.

Agriculture, meanwhile, had been left to feed on such smug and hypocritical inferences. The farm income in 1932 collapsed to a running low of perhaps \$5,000,000,000, or less than 40 per cent of the national farm income of 1929.

The year 1929 was the high-yield, big-value year of recent agrarian history. Yet according to statistics of the Bureau of Agricultural Economics, United States Department of Agriculture, approximately half the farmers of the country produced less than \$1,000 worth of products, including those consumed by the farm family, during that year.

The typical peasant farm of northern Europe produced a larger income during the same year (indeed, "peasant" farms of Germany, Holland, France, and Italy were yielding considerably more

than \$1,000 a year at the time of the outbreak of the European brawl of 1939).

About half of all our farms were in 1929, and are today, below the earning power of peasant farms of Europe. One-fourth of all our farms, roughly a million, produced total incomes of less than \$600 a year, and 15 per cent of the farms produced less than \$400 worth of products, which approximates coolie levels of Chinese agriculture for 1929. (This story, too, is entirely too true today.)

Thus, during the "banner year" of agriculture, more than 3,000,000 rural Americans were living on farms with aggregate incomes of less than \$100 per capita. On the other hand, only 19 per cent of the farms produced more than \$2,500 worth of products. Therefore, less than one-fifth of our farms produced more than 60 per cent of all farm goods raised in the United States; and the majority of these top-third farms were then, and are now, located within the boundaries of the corn belt.

A cycle of droughts beginning in 1929 proceeded to push at least one-fifth of all crop lands of the United States into acknowledged drought belts. A world-wide heyday of nationalism which encouraged nations to produce most or all needed food crops within home boundaries was clearly materializing. And export markets of United States farm crops fell to an all-time low of this century.

By 1933 a new political administration faced an old problem: a chronic agrarian ailment grown steadily worse. The initial mission was admittedly one of saving the elemental farm structure from ruin. There followed frantic condemnations of "ruining surpluses," and the incubation of an amazing credo, a highly synthetic "economy of scarcity." This credo projected strong and comparatively permanent walls about the entire nation. Quite feverishly it forgot that a crop surplus is a natural and habitual attribute of all productive land, that the validity of the term "surpluses" is highly relative to time and place, since a hundred varieties of surpluses may be changed to shortages within thirty days or thirty hours or, indeed, within thirty minutes.

Further, this rather illegitimate economy of scarcity has never recalled that industrial progress, so called, and the development of new commodities in merchandise traditionally begins with a cheap and easily available oversupply of some crop or mineral material,

whose availability as a surplus makes its commercial transformation feasible and lucrative; that to a compelling degree American inventions and American industries are aftermaths of surpluses of one kind or another.

Brain Trust gospels of the virtues in scarcity rested altogether too heavily on the quite phony adage that "the human stomach is the world's most inelastic consumer. When and if we eat more of one food we are certain to eat less of another."

Never has man propounded a sillier clatter of words. First, it is common knowledge that the entire consuming public of the entire country is not sufficiently fed today, was not adequately fed in 1933, probably has not been sufficiently fed in any year or calendar month since 1929—if then.

In terms of contemporary United States history, of the vast library of accredited agriculture research assembled by our Department of Agriculture, by testimony of audited food-clearance records of at least forty great market centers of the United States, the human stomach *is* an elastic consumer. Census records show quite clearly that poundage intake of domestic foods as a whole is increasing throughout the country. We are eating somewhat fewer pounds per year of such foods as flour, potatoes, sugar, and animal fats. But we are consuming hundreds of millions of additional pounds of fruits, green vegetables, fresh beef and mutton, fresh milk, cheese, and scores of other food crops. The scientifically accepted truth that human nutrition is measurable not in pounds and tons or yields per acre, but in calories and vitamins essential to a given body, further blasts the flimsy credo that the human stomach is an inelastic consumer.

There is also the truth that the economic denominator of agriculture is not merely one of human or animal nutrition, nor is it one of calories or vitamins, nor of the grocery-buying powers of millions of citizens. Today, as for generations past, the farmer is a producer of industrial materials, celluloses, fabrics, fertilizers, and capital goods, as well as food.

But the birth of the AAA was not characterized by lucid reasoning. The New Planners and the theretofore nonillustrious Brain Trusters had picked treacherous fields for academic platitudes. A little known, philosophically bent editor of a near-defunct, inherited,

and once-prosperous farm magazine in Iowa was made Secretary of Agriculture. Henry Wallace was (and in my opinion still is) a sincere idealist. But he came to a monstrous job ill-prepared and generally uninformed on American agriculture outside of a limited part of the corn belt. In early plans he had the assistance of a creditable department of career students of agriculture. But his cluster of executive appointees were unproved and novice: in considerable part a rather declamatory multitude of discharged college teachers and unemployed journalists.

A nonfarm cluster of political adventurers, and failures or near-failures in private life, therefore found themselves appointed bureaucratic saviors of United States agriculture. Their assignment was "to do something quick."

Their first endeavor was to create and attempt to impose an artificial economy of scarcity. Their political predecessors had politely requested farmers to plant fewer acres without compensation for the doing. The New Deal compiled tables or bounties to be paid from the United States Treasury to farm proprietors who would pledge themselves to grow fewer acres of field crops.

The first planning displayed dangerous haste. Precedents in arbitrary crop reductions are almost uniformly discouraging. There was no reliable way accurately to imitate experiments in acre control of several European nations. One after another Brazil's attempts at government reduction of coffee production, Cuba's limitation of sugar milling, Britain's struggle to limit rubber production had flopped and fizzled almost within sight and hearing of our shores. The senile floundering of the Hoover Farm Board continued these lessons of reduction futility, further proving that it is woefully difficult for any nation which does not hold a production monopoly of a crop to reduce the acreage of that crop by emergency legislation and remain solvent.

But the New Deal for Agriculture, undaunted, chose a handful of crops, all with pronounced political affiliations, for benevolent subsidy. These harvests first included corn and hogs, wheat, cotton, cattle, tobacco, rice and sugar. Entries have been considerably shifted, but the selections were, and still remain, glaringly partisan. Production of the so-called "basic" crops subsidized particular farming areas without benefit to others. There are more than a hundred

"principal" farm crops grown in the United States; almost three hundred of mentionable importance to our national agriculture.

But "basic" crops were chosen for purposes of expediency, and the huge and dramatic experiment was under headway. It was straightway evident that acreage reduction by subsidy was no satisfying answer to the dilemma. It was merely a first wedge to government supervision of land use. Farmers' "benefit" checks became as orthodox to the depressed thirties as Civil War pension checks had been to the fabulous nineties. Farm politics took renewed lease on life. Slowly and somewhat erratically, farm buying power began to climb. But poor farmers remained poor and tenants held to the traditional corn bread and creek water—as alas! they still do.

There was, and there is, admirable forwardness about the New Deal will to "do something about it," to make a decisive thrust toward coming to grips with a fundamental and long-neglected American dilemma. Henry Wallace and his colleagues have demonstrated a capacity to grow in administrative stature and to fight on gallantly in the face of overwhelming problems and doubts.

Good has come of the adventure. As one onlooker's opinion, it seems to me that the Soil Conservation Administration now shows the stripe of true legislative greatness. It makes visible in structure whereby farm owners may receive government co-operation in saving the fast-failing soil resources of this nation.

The principle of the Ever-Normal Granary is a rational expression of administrative thrift which almost without doubt would have delighted Benjamin Franklin, and probably would have pleased such founding fathers as Washington, Jefferson, Madison, James Wilson, and indeed Henry Clay. For the Ever-Normal Granary is a theory of commodity utility which time has not clearly disproved, a feasible defense against the "lean years" which are as staple to our agriculture as they were to the grain fields of old Egypt.

Lean years occasioned by droughts, fungi, or insect enemies have heretofore resulted direly for our farmers and consumers alike. Usually severe crop shortages hoist consumer's prices of both staple and occasional foods. As a rule, too, speculators, dealers, processors, and labor employed by them absorb the lion's share of increased prices, leaving the poor farmer and the poor consumer to grow poorer. Crop failures weaken and demoralize the entire agrarian

structure. Left unattended, they force farmers to sacrifice livestock, to abandon improvement programs, to forfeit productive machinery, needed repairs, and maintenance. They hoist foreclosure rates, produce ruinous losses of valid earnings, turn more and more thousands of tenants and poor farmers on the open roads or on public charity.

In my opinion, therefore, the Ever-Normal Granary is, in principle, an enlightened legislation. So, most emphatically, is the principle of crop insurance, which is definitely "in the cards" as this book goes to press.

I believe the principle of crop loans by the federal government is likewise meritorious, at least so long as it does not "peg" the prices of commodities beyond buying range of the public or reasonable parity with other crops. Except in the instance of cotton, New Deal loans have thus far operated efficiently, without serious loss to the country and with acknowledged benefit to hundreds of thousands of farms. Farm credit and rural banking are important agrarian services in which commercial and private banking have failed to keep pace with farm majority needs. Usable crops, not mere lands, are the real measure of farm value and credit. The voracious banking practice of lending a farmer cash at exorbitant interest, and securing the loan by a throat-slitting mortgage on the entire farm plant only moves the pawnshop from the city's side street into the rural spaces. A crop loan embodies a just and solvent credit base. It can be abused. But I find myself unable to imagine any graver financial abuses than the destructive farm mortgage racket as practiced so glibly during the uproarious, bloodsucking twenties and as practiced today by some of our biggest and smuggest life insurance companies.

Secretary of Agriculture Henry A. Wallace, helmsman of the AAA, early elected himself its prophet of justification:

"At the opening of the first World War, our farm production chanced to be pretty well in hand. There was no glaring disparity between the prices that farmers received for their crops and the prices they paid for the things they had to buy. It is that condition of parity or balance between our major producing groups, attained more or less by chance in the years 1909-1914, which the Agricultural Adjustment Act is designed to restore.

"The first World War rushed us out headlong to world markets. Fifty million acres of Europe, not counting Russia, were out of

cultivation. Food prices rose. A new surge of pioneers strode forth upon those high and dusty plains, once called the Great American Desert, and found that they could grow wheat there. Throughout the country, sod was broken. Before the surge was over, we had put to the plow a vast new area. To replace 50 million lost acres of Europe, America had added 40 million acres to its tilled domain and thrown its whole farm plant into high gear. . . .

"After the World War, the Allies divided the world up, with a shrewd contending eye for the deficit acres; and the United States said it didn't want any. Disillusioned and confused by terrific adventures in our first war beyond the water and by the struggle at Versailles afterwards, we yearned only to come home quietly, expand some more within our own way within our own borders, and contend thereafter only among ourselves for the old spacious, separate spoils of 'normalcy.' . . .

"Accordingly the present administration is conducting an orderly retreat from surplus acreage. In essence, it is a program of government adjustment payments to cooperating farmers, rewarding a co-operative adjustment of acreage pro-rata farm by farm. . . . Our adjustment program must in its very nature be kept elastic. If or when world trade revives, we still can use to advantage our new social machinery for crop control. . . .

"It is a belief often expressed nowadays that men are born greedy, with a strong self-seeking strain of meanness inherent in their make-up; and that you can't change human nature. I cannot believe it. It sounds to me like a sheltering modern rationalization built from the despised Puritan concept that only man is vile. The real need now is not to change human nature, but to give it a new chance . . . I do not find that men, in general, whether you talk and work with them in the country or in great cities, are naturally mean. They want to amount to something on the face of the earth, naturally; but this impulse, unless distorted, does not naturally express itself in piling up excessive stocks of goods and money. Neither is it the natural instinct of man to want to get up the so-called Ladder of Success by tramping on his neighbors' faces. . . . That an enforced meanness has brought modern society a real menace, no one can deny. The breadlines testified to this reality; a million forced sales of farms in this country tell another part of the wretched story; and then you have only begun to take

count of all the millions who live in constant and degrading fear that the same thing may happen to them tomorrow. . . .

"In an age when an advanced technology pours forth goods in a smothering abundance, fear of freezing to death and starving to death should be removed as a matter of common decency from the lives of civilized peoples as a whole. . . . This nation, and all the developed part of the world, has been terribly under the weight of the need to subsist, to keep body and soul together in the past few years. We can throw off that miserable burden. We can stand as free men in the sun. But we cannot dream our way into the future. We must be ready to make sacrifices to a known end. As we wrestle with all the infinite complexities which now beset us, the temptation is to give way to false and easy hopes and to easy ways of thinking. But we cannot afford to dream again until we have taken hold of things as they are."²

Tremendous as it has now become, the AAA is but one front of government relief for farmers. Roughly one-fifth of all work "relief" administered in the United States has gone to farm families and other rural people. In 1935, the peak year of agrarian relief, about two million rural families received money from the federal Treasury. More than a million farmers and farm laborers received some type of assistance from the federal government. These included 598,000 farm operators, 279,000 farm laborers who were heads of families, 135,000 cases under care of rural rehabilitation, and 166,000 displaced farmers or farm laborers living in cities. But at no time has the total of farm operators receiving relief grants or rehabilitation advances comprised more than 9 per cent of all farmers in the country (while 18 per cent is an average relief figure for urban families).

In twenty-one states the combined number of farm operators receiving relief grants or rehabilitation advances has remained less than 6 per cent of all farmers, and in thirteen states the ratio has been from 6 to 8 per cent. The states which have drawn the heaviest per capita handouts of rural relief are in this order: New Mexico, South Dakota, Oklahoma, Colorado, Kentucky, Florida, Idaho, Montana, Minnesota, Pennsylvania, Arkansas, South Carolina, and Wyoming. All but two of the latter states are in drought or poor-soil areas. Idaho, Montana, the Dakotas, and Minnesota adjoin the

amphitheater of recent and severe drought. Wyoming forms a connecting link with Colorado, New Mexico, Oklahoma, and Arkansas in a chain of southwestern drought states which dip into, adjoin, or include the Dust Bowl. Kentucky and Pennsylvania reflect the growing insolvency of rough and failing soil of abandoned mine communities:

FARM OPERATORS IN RURAL AREAS RECEIVING RELIEF GRANTS AND REHABILITATION ADVANCES, JUNE, 1935, AND THEIR RATIO TO ALL FARM OPERATORS IN JANUARY, 1935, BY STATES⁸

State	Total	Number of Cases		Ratio of Combined Case Load to All Farmers
		Relief	Rehabilita- tion	
United States, total . . .	593,612	390,000	203,612	9
Oklahoma	58,310	50,100	8,210	27
Kentucky	54,045	53,500	545	19
Texas	40,939	18,000	22,939	8
Arkansas	28,098	9,100	18,998	11
South Dakota	27,733	9,800	17,933	33
Minnesota	23,842	13,200	10,642	12
Mississippi	23,260	10,900	12,360	8
North Dakota	22,633	22,600	33	27
Pennsylvania	22,573	22,200	373	12
Alabama	19,507	2,000	17,507	7
North Carolina	18,674	11,800	6,874	6
Georgia	17,894	5,500	12,394	7
South Carolina	17,579	11,500	6,079	11
Missouri	16,300	9,800	6,500	6
Tennessee	15,034	12,100	2,934	6
New Mexico	17,720	5,600	9,120	36
Illinois	14,633	13,800	833	6
Kansas	14,044	6,800	7,244	8
Colorado	13,917	7,000	6,917	22
Florida	13,107	7,400	5,707	18
Louisiana	12,910	2,200	10,710	8
Virginia	10,257	7,200	3,057	5
Michigan	10,179	8,000	2,179	5

State	Total	Number of Cases Relief	Number of Cases Rehabili- tation	Ratio of Combined Case Load to All Farmers	
				Combined Case Load to All Farmers	Ratio of Combined Case Load to All Farmers
Ohio	9,444	7,100	2,344	4	
West Virginia	8,283	7,100	1,183	8	
Wisconsin	8,281	6,800	1,481	4	
Nebraska	8,077	5,700	2,377	6	
Idaho	7,620	7,500	120	17	
Montana	6,549	5,900	649	13	
Iowa	6,288	5,000	1,228	3	
Indiana	5,473	4,600	873	3	
California	4,921	4,900	21	3	
Washington	3,763	3,300	463	5	
Utah	2,294	1,700	594	8	
Wyoming	1,708	600	1,108	10	
Maryland	1,700	1,700	.....	4	
New York	1,697	1,600	97	1	
Massachusetts	1,500	1,500	.....	4	
Maine	1,254	900	354	3	
Oregon	1,158	1,100	58	2	
New Jersey	1,128	900	228	4	
Arizona	957	800	157	5	
Connecticut	564	400	54	1	
Vermont	401	400	1	2	
New Hampshire	213	100	113	1	
Nevada	121	100	21	3	
Delaware	100	100	.....	1	
Rhode Island	100	100	.....	2	

Any onlooker, from the traveling salesman, who learns of rural America through his Pullman window, to the most astute of rural research worker, learns that all farming populations are not tillers of soil. Statistically speaking, I know of no great farming areas in the United States where more than 80 per cent of the male citizenry of working age are actually cultivators of earth. Even in the most rural counties of the most rural states this generality holds. As a way of life, as an established order of society, agricultural requirements support population—storekeepers, traders, doctors, lawyers,

teachers, brokers, carriers, hired laborers, veterinarians, smiths, and numerous other trades and professions—whose number varies with competency, crop prices, and seasonal or local needs.

Besides these more or less necessary participants in farming life, the farm realms draw others, perhaps less requisite but sometimes more colorful—millers and carders, water witches, midwives, confidence men, gypsies, livestock traders, fortunetellers, peddlers, and salesmen. And even though highways have come into virtually every one of our farming counties, even though airplanes dip through the always agrarian skies and automobiles come by the puttering millions, still farm lands support their villages of trade, their community life, their schools, and in the more flourishing realms, their churches and community centers.

Incidental trades and "support populations" continue to build a vital part of the pattern of rural life as they have in the past and as they evidently will do in the future. Farm life can no longer be patterned wholly by farmers, and the challenge of land does not stop with wielders of hoe and plow.

It follows, however, that the great majority of rural support population must take its support from tillers' sweat and the legitimate harvests of growing fields. Although only about half of all rural workers are actually at farming, the fortunes of most of the non-farm rural citizens rise and fall with those of the farmers. When farmers grow poor they cannot pay taxes, nor hire workmen, nor support dependent professions. This obvious reality opened the way to federal relief for agriculture, which began officially in July, 1932, when the Reconstruction Finance Corporation was authorized to lend \$300,000,000 of federal money to states and communities for emergency relief purposes. Ten months later, with the incubation of the Federal Emergency Relief Administration, the United States formally entered the business of direct relief.

Prior to 1933 the great majority of all public and private relief had gone to cities. During the first nine months of 1932 it was estimated that no more than 100,000 country people were receiving public assistance. Virtually all this was under terms of state poor laws. As soon as federal funds became available, and during the final quarter of 1932, rural relief loads shot skyward to more than a million cases. The New Deal, therefore, inherited a stupendous burden of rural relief—prefabricated and ready set. Until 1935 the

rural relief burden mounted rapidly to double the original inheritance and to touch a temporary high of 16 per cent of all rural families of the United States; roughly 8 per cent of all farm families. The percentage has receded slowly. Rural relief loads remain heaviest in the Appalachian regions, the Ozarks, cutover lands of the Dakotas, Nebraska, western Oklahoma, and Kansas. Rural doles, however, have ranged only in "lower brackets" of from \$6 to \$18 per month per family—as compared with two or three times that amount for city relief.

During most of the thirties only about 30 per cent of our people on rural relief were workers: more than 10 per cent were superannuated, 10 per cent were minors, 15 per cent were widows, and the remainder principally children, cripples, invalids, and mental defectives. About half of all rural workers on relief had at least one week's employment per month, usually as farm operators or farm laborers, as an average figure, and managed to stay off relief for three months after losing their jobs; whereas farmowners remained off relief for an average of sixteen months after losing their farms. In all these respects rural relief is more hopeful of future and more convincing of need than the average of city relief.

We have already noticed the general background of farm depression; the tripling of farm mortgage indebtedness between 1917 and 1929; the fall of crop value from \$12,000,000,000 to \$5,500,000,000; the sinking of farm-hand employment from 114 to 90 per hundred farms (between 1929 and 1933); and during the same years the decline of farm laborer's wages from \$49 to \$27 per month.

Rural depression as a whole continues more disturbing than actual depression on the farms. Miners, for example, form an increasing proportion of the rural relief load, as general mine operation stays less than half of its 1929 level. Rural building industries have tumbled. Such dominantly rural manufacturing as sawmills, pottery and clay works, stone quarries, glassworks, and remote iron and steel mills remain "depressed." During the middle thirties more than half the land area of the country was designated by the Department of Agriculture as "emergency drought areas." The silent and ruinous specter of drought and blowing dust is forever close at hand. In part-time farming areas, such as the Ozarks-Appalachian belt and the lake states cutover lands, perhaps one-fifth of the entire rural population seems to be permanently on somebody's relief roll. In

regions of richer soils, such as the corn belt and the hog and dairy lands of the near West, rural relief loads can be approximated as a permanent percentage of from 3 to 6.

Rural relief in the wheat belts and the Far West generally varies drastically with annual rainfall—from less than 10 per cent in "good years" to 35 per cent or more in extreme drought years. In all farming sections rural relief demands vary considerably by month and season, rising sharply in winter, falling notably in spring, summer, and early autumn.

Nowadays there is increasing stability in general statistics of farm population. During the sixteen years between 1919 and 1935, for example, the Bureau of Agricultural Economics estimated that 28,000,000 people left farms and 20,000,000 came back to farms. During the period 1930 through 1934, the bureau estimated that 6,578,000 persons arrived at farms from nonfarm areas, but less than 2,000,000 of them were still on farms by the beginning of 1935. Similarly 7,176,000 persons left farms during the same period and only 2,593,000 failed to return. About half of all recipients of rural relief had recently moved from home lands to new locations.

There is another highly significant characteristic of present-day rural relief, an attribute marking it as a more than usually acceptable social investment. According to the *Annals of the American Academy of Political and Social Science*,⁴ 444 children under five years of age per thousand white women of twenty to forty-four years of age are now necessary to maintain a stationary population for the United States as a whole. Only rural America is producing a surplus population to replenish urban areas and to overcome fast-tumbling city birth rates. Socially speaking, children remain the most important of all farm crops.

On the whole, the poorest farming sections are the most prolific of children. But all farming sections, even the richest, are begetting future reservoirs of citizens. Rural birth rates are highest in the Ozarks-Appalachian belt, with 838 children of less than five years to each thousand women of twenty to forty-four. In the spring wheat belt this figure is 804; in the eastern cotton belt, 752; in the lake states cutover lands, 737; in Rocky Mountain reclaiming lands, 644. Statistically it seems inevitable that farming lands will continue to furnish youth and new blood for cities. And that is an indispensable service for which a nation can afford to pay.

For census purposes a farm is defined as having at least three acres of land or a productivity valued at \$250 or more. Also, a farm is all the land directly farmed by one person, either by his labor or with the assistance of members of his household or hired employees.

This is an extremely lax definition. Even so, as we view the tangles, dead ends, and contradictions incidental to rural relief today and yesterday, the truth becomes undeniable that the commanding burden of this relief is concerned with rural support populations and with agrarian hangers-on, such as harvest workers, now-and-then farm hands, sharecroppers, ill-situated tenants, and "subsistence" or part-time farmers—ruralists who have settled on some crust of earth, usually an extremely poor one, with the rather vague hope of snatching an occasional crumb or small potato from the bounties of productive soil.

Depending on the particular area involved, this weary multitude may be defined either as the inevitable back-draws of vanished frontiers or as an agrarian dialectic from whose numbers will be drawn reserves of bona fide farmers, villagers, and industrial workers of tomorrow.

As already suggested, more than half of the entire rural relief load has been concentrated in fourteen states, which combinedly have less than one-fourth of the farms of this nation. Except in excessively poor lands or regions of intense droughts, less than a tenth of the recipients of rural relief have been farmowners. Further rural "reliefers," on the whole, have not been livestock growers. Few have had schooling or formal training in the trade of agriculture. Less than 4 per cent are high-school graduates; less than a third have completed grade school.

Miscellaneous rural relief has been molded into catalogues: emergency relief, advances under a "rehabilitation program," and employment on public works. The evolution has been in that order, on the ground that any program for the reconstruction of American agriculture must take close account of human conservation as well as conservation of natural resources, and must be permanently geared to the particular community in which the relief is attempted.

Obviously mere temporary assistance is the goal of direct relief, which can rarely be expected to yield lasting benefit. In this con-

nection the Works Progress Administration offer a pertinent critique: "The more fundamental measures for building a superior agrarian civilization in the United States are long-time measures, not planned for immediate results. They require national co-ordination and Federal financial support. Successful rehabilitation cannot be accomplished without a continuing course of action, uninterrupted by sudden shifts of policy such as have characterized relief and rehabilitation programs during the depression years."⁵

Until a decade ago, poor country people when penniless and hungry could depend only upon neighbors, or the local poorhouse, or a possible handout of a dime or a quarter from the gentleman wearing the Chesterfield topcoat. There are no longer enough poorhouses or neighbors with bank accounts or gentlemen with unattached dimes to go around. The National Resources Board concludes that of soil that is entirely or nearly torn from 125,000,000 acres of United States land; that another 100,000,000 acres are fast undergoing erosion destruction, and that at least 35,000,000 acres are already wasted. Of grim necessity, perhaps a million farmers are today cultivating subsoil and not topsoil, which is about as satisfactory as eating corn on the cob without uppers. It is further to be repeated with deepest regret that the inauguration of the AAA has failed to prevent displacement of tenants and sharecroppers from their land; while it has given landlord the plush-lined opportunity to collect "old debts" from sharecroppers according to the prevailing, peculiar, and otherwise crooked arithmetic so long employed by the habituated plantation owner south of Mason and Dixon's line.

Meanwhile rural relief has run virtually the entire gamut of Roosevelt relief authority. When Civil Works Administration and the FERA had opened drives for direct employment of rural people, the latter agency, late in 1933, set aside special funds for "drought relief," that is, for purchase of grain, hay, and other feeds for the benefit of "drought-impoverished Westerners." The United States Bureau of Roads next established road-building projects for drought-land farmers, while the PWA assumed up to 30 per cent of costs of materials. Wages were paid for the road-building projects by the CWA.

During 1934 "drought relief" was extended to almost half of our land surface. In that year the FERA was allotted funds for relief

land purchases. Relief took the form of clothes, food, household supplies and medical care, feed for livestock, seed for forage crops, and employment on the so-called work program.

Agencies co-operating with the FERA in the colossal undertaking of drought relief included: state and local relief administrations; the Emergency Conservation Work; the General Extension Service of the United States Department of Agriculture; the AAA; the Farm Credit Administration; the Farm Debt Adjustment Service; the Federal Surplus Relief Corporation, which took the livestock purchased by the AAA and had it processed for distribution among relief families.

So gigantic a kettle of alphabet soups resulted in a monumental instance of bureaucratic confusion and incompetence. In the early days of FERA, relief administrations of southern states began to make advances of so-called "capital goods"—fertilizers, seed, tools, and work animals to ruralists on relief. In April, 1934, FERA begot a Rural Rehabilitation Division to "develop this type of aid to farmers on a national scale."

For farmers living on "fertile land," a highly arbitrary and unscientific phrase, it proposed to provide such resources as seed, livestock, equipment, buildings and building repairs, and more land, if needed; to arrange debt adjustments, if necessary; and to give training and advice in farm management and home economics. Displaced farmers would be relocated on the land. Farmers living on poor land would be moved to better land purchased by a land program in which the AAA shared. Rural relief families living in towns having less than 5,000 inhabitants would be provided with subsistence garden. Selected families would be transferred from the towns to subsistence farms. All subsistence and capital goods provided under the rehabilitation program would be assigned a cash value, charged against the families' accounts, and paid for by the farmers in cash, in kind, or in the work on federal work projects.

"Though these general objectives were determined by the Federal Emergency Relief Administration, the program was worked out under state control. The state emergency relief administrations organized their own rural rehabilitation divisions to conduct the programs. . . . It is not surprising, therefore, that the programs in practice diverged somewhat from the original plan. Although Administration machinery was provided for organizing rehabilitation

on a national scale, the program continued to be concentrated in the Southern States . . .

"The first F.E.R.A. grants specifically for rural rehabilitation, made in May, 1934, went to seven Southern states—Alabama, Georgia, Louisiana, North Carolina, Oklahoma, Texas, and Virginia. . . . In February, 1934, fewer than 88,000 cases received advances under the rehabilitation program, and more than half of these were in the two states of Alabama and Louisiana. Ninety-three percent of the total were in the Southern states of Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, Oklahoma, South Carolina and Texas. Outside of the South the only states with more than 100 cases were Illinois, Indiana, Michigan, Missouri, Ohio, and Washington."⁶

At the heyday of this experiment, rural rehabilitation cases climbed to a high of approximately 400,000. The type of goods advanced to "clients" varied from area to area according to the type of farming. In cottonlands, mules and fertilizers were the usual advances; in Tennessee, fertilizers, seeds, and livestock; in Wisconsin, cows, horses, pigs, hens, seed, and implements. In Olmstead County, Minnesota, machinery loans were refinanced and in Hawkins County, Tennessee, farm mortgages were secured with the help of rehabilitation advances.

As a rule the rehabilitation agency assisted the farmer in selecting the required goods and made payment in his behalf through the Rehabilitation Corporation, the latter retaining title to durable goods and livestock.

Terms of repayment of these loans varied by states, or counties. Advances for capital goods were generally repayable over a period of three to twenty years, while repayment of advances of perishable subsistence goods was to be made within one year. Crop mortgages and personal notes were given as security. Interest rates varied with locale. In some states no interest was charged until the notes reached maturity; in others the advances were free of interest for the first year. In still others government lending agencies accepted payment in marketable produce; in drought belts, borrowers were given employment on work projects and thus were enabled to pay back part of their advances.

In June, 1935, all responsibility for the Rural Habilitation program was shifted from the FERA to the Resettlement Administra-

tion; taken out of the hands of the state administrations, and centralized under federal authority.

Under the regime, rehabilitation loans to farmers continued, with the Resettlement Administration providing farm management plans (somewhat academic and highly controversial) and supervision to loan clients, charging interest of 5 per cent and limiting the period of a loan to five years. The Resettlement Administration introduced direct grants for certain needy farmers. But the role of rural rehabilitation diminished rapidly during the processes of transfer and buck-passing. Meanwhile the RA became more and more a political pushball. Rather consistently, for five years, RA has lost caste and experimental importance, until its final demise.

Amounts of rural relief have varied enormously by section, and by color; viz., average monthly allowance to Negro tenants of the eastern cotton belt has been only one-half that of white tenants of the same area. State administrations, perhaps, had a rule in gauging

TABLE SHOWING AVERAGE AMOUNT OF RELIEF RECEIVED BY RURAL HOUSEHOLDS, BY USUAL OCCUPATION OF THE HEAD AND BY AREA, JUNE, 1935

(138 Counties Representing 9 Agricultural Areas)

Area	Total	Agriculture				Nonagri-culture
		Owners	Tenants	Croppers	Laborers	
All areas	\$12	\$13	\$12	\$ 9	\$12	\$15
Eastern Cotton:						
Total	9	9	10	10	8	12
White	10	10	12	10	9	14
Negro	7	9	6	9	7	10
Western Cotton:						
Total	9	9	10	9	8	9
White	9	9	10	9	8	10
Negro	8	8	9	8	7	7
Appalachian-Ozark	10	10	9	..	11	12
Lake States, Cutover	20	19	25	..	18	21
Hay and Dairy	22	20	21	..	23	23
Corn Belt	16	13	16	..	17	18
Spring Wheat	18	17	18	..	17	23
Winter Wheat	12	14	12	..	11	15
Ranching	18	18	20	..	17	16

the black man's "standard of living." But in the light of census information or reputable agricultural economics, so glaring a discrimination certainly cannot be justified.

AVERAGE TYPE AND AMOUNT OF TOTAL ADVANCES TO RURAL
REHABILITATION CLIENTS, BY COLOR AND BY AREA, JUNE, 1935

(138 Counties Representing 9 Agricultural Areas)

Area	Number of Cases	Average Amount of Advances	Advances for Capital Goods		Advances for Subsistence Goods	
			Per Cent Receiving Advances	Average Amount	Per Cent Receiving Advances	Average Amount
All areas.....	14,428	\$189	84.0	\$168	83.1	\$58
Eastern Cotton:						
Total.....	6,288	175	90.3	119	97.9	69
White.....	4,028	205	91.2	145	98.8	74
Negro.....	2,260	122	88.8	73	96.3	60
Western Cotton:						
Total.....	2,332	388	91.1	362	97.3	60
White.....	1,872	416	91.8	387	97.3	62
Negro.....	460	276	88.3	257	97.4	51
Appalachian-Ozark.....	904	153	92.3	133	76.5	40
Lake States, Cutover.....	770	104	98.7	67	38.2	100
Hay and Dairy.....	1,386	168	89.6	176	32.0	31
Corn Belt.....	1,284	116	68.2	144	62.5	28
Spring Wheat.....	948	31	20.5	44	94.3	24
Winter Wheat.....	310	187	86.5	178	87.7	39
Ranching.....	206	182	69.9	201	77.7	53

The money value of the advances given to clients varied from \$31, the average advance in the spring wheat area, to \$416 for whites in the western cotton area. Next to the western cotton area, the winter wheat and ranching areas paid the highest average advances. In terms of advances for capital goods alone, the advances only were considered, the lake states cutover area was found to have given the highest amounts, averaging \$100, followed by the eastern cotton belt with \$69. Moreover, the lake states cutover was the only area in which the average value of advances for subsistence goods exceeded the average value of advances for capital goods.

According to elaborate tabulations of the Works Progress Administration, a composite picture of the typical farmer on relief would show a man of about forty, married, father of three or four children, sole breadwinner for the family, a resident of his county for at least ten years. The average farm owner of the United States is a man of forty-seven. Farm laborers and tenants on relief are somewhat younger.

These statistics and others suggest rather clearly that farm labor is becoming a permanent occupation and is no longer only the first rung of the agricultural ladder. Quoting the Division of Social Research of the WPA:

"Whereas 96 percent of the owners and 95 percent of the tenants, other than sharecroppers, remained at their usual occupations under the rehabilitation program, 44 percent of the croppers climbed up the agricultural ladder, becoming tenants. . . .

"Only one percent each of croppers and other tenants on rehabilitation had gone so far up the agricultural ladder as to become owners. The percentage was higher for the farm laborers (6 percent), whereas 20 percent of the nonagricultural workers had become farm owners. Almost one-half of the farm laborers and non-agricultural workers became tenants (exclusive of croppers), however, this being the easiest way to return to the land. It is possible, of course, that some of these had carried out the shifts to tenancy before they became rehabilitation clients. This explanation would apply to those cases where nonagricultural workers returned to the open country and took up agriculture again to tide themselves over a period of unemployment."

Farm work projects have included such enterprises as the building of roads, dams, and water-conservation projects, processing of alleged surplus commodities, improvement and building of country schools, churches, and clubs. By 1936 the WPA administrator had conceded these generalities as regards public works for farmers:

a. "A works program is not well adapted to conserving agricultural assets unless it is concentrated in off-seasons or unless members of the farm families other than operators are available for employment.

"Because of efforts to operate on marginal lands, because of large families, or because of natural disaster, such as droughts or floods, farm families may badly need cash when the loan of such cash would be economically unsound. . . . Every effort should be made to provide this cash through grants to families temporarily in need, in order that farmers may remain on their farm and preserve their agricultural asset. . . .

b. "This points to the consideration that in many instances direct relief, such as Resettlement emergency grants, is most suited to the needs of the farmer. Though perhaps less calculated to preserve his

self respect, such grants, nevertheless, leave him free to devote his full time to recouping his farm assets.

c. "Work projects which tend to draw farmers into towns and villages should be minimized. . . ."

Rehabilitation was set as a goal for instances of rural relief in which the family head is employable and judged capable of agricultural success. During 1935 rural cases classified as unemployable were returned to state and local care. In 1936 the Social Security program began to assume responsibility for the aged, the blind, and for dependent children. The test for accepting an applicant for rehabilitation became a matter of decision by the supervisor and a local committee as to whether he was a promising enough "risk" to be able to repay such loans as might be necessary for his return to established farming.

Since 1936 attempts at direct rural rehabilitation have steadily diminished, though government loans to farms have increased. Meanwhile hundreds of thousands of small farmers, farm laborers, and other rural citizens have been assigned to the rolls of WPA, now the all-inclusive colossus of federal relief.

The swath of rural relief diminishes. But a great social venture is begun and is by no means ended.

The venture abounds in administrative and theoretical faults. Judged most charitably, the giving of federal relief to rural America has been fantastically extravagant. Its leadership has been, and to a large measure remains, nonagrarian; the ideology and amiable day-dreaming of "socially minded" city people who have packed, shipped, and sown without necessary foreknowledge of the land, its investment problems, its vagaries, or of the minds and opinions of men and women for whom farm land is essential life.

The above may be grounds for regret, but not for condemnation. The New Planners of farm relief galloped pell-mell along an un-trodden path. They have fought and fumbled a way into what was fast becoming an uncharted wilderness of social despair. For decades rural poverty has been accepted smugly as a bucolic inevitable. Prior to 1933 there were no real precedents or landmarks in administration of rural rehabilitation or direct aid. From its birth the New Deal's principles and practices of rural rehabilitation had conflicted with fundamental theories of the AAA.

This fact alone is not of serious consequence. Relief expenditures of public moneys in rural America have not been vast in comparison with other billion-slinging "projects." For example, total outlays for rural rehabilitation do not approach the fantastic costs of the fantastic tide-harnessing at Passamaquoddy.

The really serious fault of federal relief for rural people has been, and remains, one of inconsistency; of rapidly changing goals, administrative changes, rapid and politically guided shiftings of responsibility; ambiguous declarations of purpose, which lead rural clients and local administrators alike into perennial furrows of confusion.

By current nature and proved history, rural rehabilitation is an issue in long-term planning, not in temporary politics. It requires an enormous amount of accurate research which was not available in 1933, and is not sufficient today. A perfect instance of this truth is contained in the Resettlement Administration's declaration of lands as "marginal" or "submarginal" without benefit of scientific soil surveys, the one essential criterion to the truth or falseness of such a classification.

At least a beginning has been made in a field of profound social importance; a field which holds possibilities of outstanding attainment during years and decades immediately before us.

16

THE FUTURE OF RURAL POVERTY

THE word "poverty" is loose-fitting. A dictionary on my desk defines it as "state of being poor; destitution; need; penury; (of soil) unproductiveness . . ." It defines "destitute" as "bereft, abject; without resources; in utter want."

To a considerable extent the present book treats of rural destitution. It cannot be greatly concerned with "middle-class poverty," which means little beyond the inability to afford certain of the more grandiloquent luxuries. It would be enlightening if we could define and evaluate poverty in terms of actual nutrition or malnutrition. That is in keeping with the etymology of the word. Today there is no accredited source of, or adequate background for, such a definition, though malnutrition is excessively common in rural America.

Malnutrition does not necessarily involve gnawing hunger. It is more frequently a phenomenon involving insufficient variety of foods or poor co-ordination of food sources. Incompetent transportation and antiquated distribution practices common to most of rural America are important contributing factors to rural malnutrition as surely as are extreme infertility of soil and incompetence in land use.

The phrase "on the margins" is doubly applicable to rural America today. To say that our vast rural spaces now hold 20,000,000 marginal peoples and 150,000,000 acres of marginal lands is perhaps a reasonable approximation.

It is self-evident that perhaps half of the permanently poor of rural America are not actually farmers, though millions belong to trades or occupations which have solvent places in the rural scene or have had in the recent past. As an apt instance there is the

countryside "washwoman"; a follower of the so-called "trivial trade" which are being crowded completely off the rural landscape or forced into metamorphoses of becoming local monopolies, drab sweatshops, or additional parasites on the agrarian body.

Unskilled, low-caste labor by the millions still waits to earn its daily bread. And exploiters, whether lions in sheep's clothing or sheep in lions' clothing, still act to profit from this fact. So, for that matter, do our bumper harvests of politicians, league organizers, labor union bosses, and totalitarian promoters.

Our nation has poor people aplenty; unemployment in abundance. But during fifteen reasonably diligent years of American reporting I have never encountered the alleged American "masses." I have viewed bread lines, collapsing banks, dying industries, dying trades, waning towns, and once-great farming belts now gone hopelessly amuck. I have beheld and experienced niggardly privations; actual hunger in the very heart of the greatest food-raising regions of the country. I have watched many forces which perpetuate American poverty. Yet to speak honestly I have never found convincing evidence of any durable establishment of American masses. In the United States at large "masses" is still a trade term employable by professional Communists and other loose-lug mentalities. Absence of socially ordained masses remains a paramount defense against agrarian peonage.

But the sciences of economy and the romanticisms of social snobbery can and do become strangely interlocked. Industrial peonage is an incessant possibility and today incidental rural trades seem actually in graver danger of abject impoverishment than does the principal trade of agriculture. Want is still at handclasps and hunger but an easy stone's throw from rural margins.

In one enlightened community, during October and November of 1936, a widow with five children arrived aboard an ancient and travel-worn truck. After they had settled in an abandoned shack the mother began trudging from house to house begging the chance to work in return for food. But her begging was of no avail. Since she was an "outsider," the shopkeepers and villagers chose to give nothing. Late in November, 1936, the mother died of starvation—very near to the geographic center of this Land of Plenty, so eternally and bestirringly pleased to succor Poor Bleed-

ing Belgium or Poor Brave Finland with 7,000,000,000 tons of cookies.

Trials of marginal living make a repetitious story. Here, for example, are some miscellaneous items as noted by my mother in her journal of old times in the hills of northwestern Arkansas:

"In 1874, the year of the drought, people almost starved. One woman told my mother that for ten days she had only apples to eat, and never could eat apples again. . . .

"That Christmas I got a dime's worth of marbles for my four younger brothers and made marble sacks out of bright red flannel. I heard Ma tell Pa she had made me a needle book. I have the needle book yet. Pa bought some stick candy. Several little girls of the countryside got nothing at all at home. They went around saying 'Christmas gift!' and got what they could. . . . Country girls seemed to regret more that they never had a doll than that they didn't get to go to school. . . .

"Often the womenfolks would make tatting in place of buying store thread. Most of the quilts were pieced with thorns. All basting thread was saved. Scraps were precious and many beautiful quilts were made with them. If you got a new dress, your friends wanted a scrap for their quilt, and to remember you by. . . .

"It was the common habit of young women to go barefoot for miles and in summer to carry their shoes, stop by the creek and wash their feet, or pull their everyday shoes off and hide them in the bushes, and then go on to church in their Sunday shoes. . . ."

Returning to the classic and waning figure of the countryside washwoman. The Widow Rush took in washings for my home countryside in Arkansas. . . . Back at the beginning of the nineties, when she was around seventeen, Molly March married Jim Rush, a plain, big-footed citizen who worked in a crossroads lumbermill —a murderously heavy job paying \$1.25 for a ten-hour day.

Jim was not the kind to complain and Molly was happy with her man. After some years as a lifter and splitter of hickory logs Jim was promoted to manipulation of a belt saw on the far side of the lathe. The saw was aging. The equipment had been designed for softer timber. There was no real reason for surprise when the belt saw came in two. The tragedy was merely that Jim Rush could not jump quickly enough. The razor-sharp saw split his jugular and

slashed deep into his chest. He was dead before they could raise him from the floor.

The millowner carried no insurance. Neither did Jim Rush. But the millowner paid the bills for a \$75 funeral and gave the widow \$100 in cash. It was one of the most generous deeds in the civic history of Fayetteville, Arkansas.

So Molly Rush became the countryside washwoman. Meanwhile she had borne Jim Rush twin sons—Jim and Bob. The Rush twins happen to be my age. They entered Miss Anna King's first grade at the local school the same fall that I did. Next only to myself, Anna King listed them as the dullest pupils she had.

But the Rush twins were clean and healthy children, well behaved and gracious. Before they were six they had become Molly's partners in work. Before school they would forage for firewood and carry numerous buckets of sparkling clear water from "Skull's branch." After school they would go to the store for soap and ball bluing and deliver huge baskets of finished washings. The twins also collected money and delivered it religiously to their mother. From the beginning dishonesty or trivial meanness was quite evidently out of their world.

We urchins acquired a liking and respect for the Rush boys. Southern snobbery is largely an adult trait. We rather envied the Rushes their prestige in appearing at doorways with huge baskets of washing; also their deputized right to purchase soap, starch and bluing, in almost limitless quantities, at Gallaher's store.

Molly Rush's life meanwhile was not unhappy. She found real delight in her sons. She worked hard in open wind and weather. She grew plumper with the years, and though her flesh remained hard and brown, her red hair turned gray during her early thirties and her nut-brown Irish freckles gradually increased in size and number. Once she was stricken with pneumonia and came close to death.

The twins were twelve then. They quit school and began doing the washings themselves. Housewives nagged a little because the work was not so neat as before. But the boys improved their services and few customers were lost. Meanwhile old Doc Wood, who almost never forgot a medical word and almost never remembered to send a medical bill, and gave free services, counsel, and encouragement, sent a woman to cook and nurse for Molly, authorized a

genial grocer to keep the home properly provisioned, and supplemented medical skill with devout prayer.

So Molly Rush recovered and after a few months was back at the washing. The twins got jobs in town; one in a bakery, the other in a restaurant. They have been employed, more or less solvently, for more than twenty years.

Molly aged somewhat before her time and died in her late fifties. The twins were heartbroken and numerous old-timers were more than casually grieved. Actually the age of the countryside wash-woman had passed away some years before Molly did. During her working life the town had become successively equipped with a public waterworks, sewer system, power plant, light plant, asphalt pavements, a Methodist Assembly, a university faculty club, a Great White Way, and two steam laundries, which paid deplorable wages.

Molly Rush's life was no bed of roses. She earned all she got and more. Occasionally she was "snobbed" by the town wives and almost perpetually by university faculty wives. An ungrounded rash of scandal almost cost her her membership in a local church. But Molly returned to the church and she was buried by its ancient and benevolent pastor. Furthermore, a quartet from the church choir journeyed over the muddy roads to Rose Hill, went into the small green boxlike home of the Rushes, stood in the lamplighted corner beyond the coffin and sang "Lead, Kindly Light." Out under the oak trees a smoke-blackened iron kettle, rambling strands of clothes-lines, and a stack of assorted galvanized tubs waited in pathetic abandonment. Trees nodded in the first spring wind. Wild cherries lifted their brave young leaves.

Molly Rush had lived and died in poverty. Yet she owned her cottage, kept it in good repair and free of debt. She had only a service to sell. She gave generous measure and benefited by occasional gestures of human kindness. She raised her sons well. Thus Molly Rush was broadly typical of the independent laundry caterer of an earlier American era. Throughout most of the nation, her services and those of hundreds of thousands of others like her, have been replaced by mechanical laundries. On the whole, the exchange has been deplorable. It has lowered a menial but highly necessary service to what is preponderantly a widespread sweatshop trade. The commercial laundry, broadly stated, is American work approximately at

its worst. Broadly stated, it is a badly organized, aimlessly managed, weakly capitalized industry. Its foremost possibility for profit lies in ruthless exploitation of low-grade female labor. The industry is viciously competitive in most instances; otherwise avidly monopolistic. It is overmechanized to a point of absolute larceny, since for years maximum laundry profits have gone to manufacturers and sellers of laundry equipment. Most of this equipment is sold to operators on easy terms. Much of it is never paid for. Much of it is never used properly. Much of it, too, is installed in ramshackle, badly ventilated, antiquated buildings wherein working conditions are little short of murderous.

As a rule, wage pilfering is not a profitable vocation. This rule is validated by the best available statistics of the American laundry industry. To be sure, a fair-sized army of racketeers, principally urban Italians, have been enabled to strut and swell with a share of the dimes and quarters which weak-spined laundry operators have filched from the pay envelopes of their multitudinous employees. But a majority of commercial laundry operators have not prospered simply because they are extremely bad operators. Thus American laundering has grown into a \$500,000,000 industry foundationed by human privation.

Replacement of most of the work once performed by the countryside blacksmith with products of the commercial foundry and metal-works is another, and somewhat less distressing, chronicle of a countryside trade now being vanquished by a preponderantly urban industry. Substitution of drilling rigs in the work once done by the countryside well digger is another of a hundred instances wherein rural population is being divorced from its countryside function, thus adding incessantly to direct obligations of productive soil.

It seems inevitable that the passing of years should relegate once-traditional countryside trades to the land of limbo. Offsetting this casualty of time there are unquestionable opportunities for creating new trades for this sore-driven rural support population. Continuing decentralization of industry changes some of these possibilities to reality. There appear to be other ways of approaching the same goal.

Replacing the dying trades of the earlier countryside are newer trades, destined to make solvent use of wanling soils and failing countrysides. Propagation of wildlife is such an enterprise.

Near the town of Gray, Maine, I met a young farmer named

McNeil Browne, a thirty-year-old who is growing wild game crops worth about \$9,000 a year, on a long-abandoned hundred acres which are far too poor for any kind of field crop. He raises 11,000 pheasants a year, sells 9,000 to the game commission of his state for use in replenishment programs. He raises a crop of quail for the same use and makes a raccoon crop—for state replenishment work and sale to private hunting clubs. He raises deer, foxes, wildcats, owls, and other quarry for purpose of experimentation in native wildlife.

Wildlife farming marks a dependable road to land conservation, as it begets a new agrarian trade. Hundreds of farms are turning poor land and waste pastures to profitable ranges for native fauna. In Oklahoma a group of farm boys have interested their fathers in pooling a big acreage of wasteland for a community game bird range. In Wisconsin a cutover county has "planted" about 12,000 acres of tax-delinquent stump land to native waterfowl. In Jackson County, Arkansas, a worn-out cotton plantation has been changed to a productive range for native deer.

Deer, foxes, and raccoons are apparently native to every state. Quail can be propagated in most parts of the country and, though not an American bird, the pheasant has much the same range and eating habits as chickens. A grown deer remains sleek and healthy on half the ration of a half-grown calf. It is about as easy to raise raccoons as dogs. When kept in small groups native animals and birds have fewer diseases than most domestic livestock. Demands for such crops are rapidly expanding. There are hunting clubs which buy the so-called "semisport" animals—fox, raccoon, and rabbit. There is the great staple industry of fur farming which now centers on silver foxes and minks. There are many profitable openings for private bird ranges. But McNeil Browne directs most of his own farming to production of valuable game birds to be "planted out" by his state game commission so that the great business of hunting can keep on bringing in tens of millions of dollars each year to the amazing state of Maine.

The first time I visited Browne's farm I couldn't see much except rough pasture, steep mounds, and broken timber. Then I noticed a strange kind of meadow. It is planted to strips of seed-bearing grasses separated by unplanted strips. At the edge of each grass strip are drilled rows of sunflowers. The meadow is a pheasant range.

McNeil explained that he disks the strips and sows the grass in early spring. The tall grasses and sunflowers provide seed which help provide the protein food which all game birds require. Also they protect the pheasant crop from hot sun and rain. The un-planted strips are for feed and watering pans.

I drove up to the new white bungalow home which is flanked by rows of wire-enclosed pens and cages. The barnyard is really a farm zoo. One wire-enclosed pen is home for a rather snarly red fox. There is an enclosed pen of horned owls. There is a four-acre deer range surrounded by an eight-foot fence, and a long row of coon houses which are small wooden hutches each with its own wire-enclosed yard. Then there is a big wire-roofed lot for the laying flocks of pheasants and quail, a neat white incubator house, and beyond that a long gray single-story brooder house for game bird chicks.

Self-evidently, wildlife farming is a bizarre trade. But McNeil Browne has grown into it in a normal and logical way. Son of a career Maine game warden, at twelve he was helping his father on game patrol. Each Maine warden is assigned a given hunting area. Once every week the warden must make a firsthand inspection of that territory and send in a report on game conditions. In addition he must supervise hunting licenses, enforce the game laws, arrest poachers, help shelter and feed winter-starved birds and animals, trap and kill destructive varmint, and so on.

So McNeil learned the game warden's trade from scratch. He also learned that wildlife is profoundly interesting. After being graduated from high school he learned that Maine's game commissioner was looking for a bright young man to open a modern game farm which might furnish a dependable supply of home-grown quail and pheasants for "planting" in bird-hunting areas of the state; also to demonstrate to other farmers the possibilities of game birds as a poor-land crop. McNeil Browne took over an abandoned farm four miles from the town of Gray, fenced it, built some sheds, a hatchery, and a brooder house. He had to spend most of his first three years experimenting, after which he chose pheasants and quail as his principal crop. He began by setting the eggs under hens, raised a laying flock, then bought a modern electric incubator, with automatic trays, fans, and diverse gadgets. Two years ago he got under

real headway with pheasants. Last year the incubator turned out more than 12,000 game bird chicks.

It is hard to talk with McNeil Browne without absorbing some of his quiet enthusiasm. He believes that wildlife farming is pioneering in the real sense of the word; and that it is destined to be a great rural vocation of tomorrow.

He points to Maine, his homeland, where fishing, hunting, and outdoor recreation are actually the pre-eminent source of livelihood for the entire state.

American recreation has shifted from the catalogue of luxuries to that of necessities. Customary explanations include such items as shortening of working hours, incubation of more and more millions of high-school and college graduates, lengthening of average life span, government striving for "social security," and so on.

But the growth of recreation in America actually transcends these alleged motivations. It makes them results, rather than causes, of an eminent development of our generation and century. Recreational demands continue to multiply. Twenty years ago recreational goods were drastically limited in scope. With exceptions of autos and auto supplies, resort developments, railroad and ship travel, they were largely limited to novelties ranging from confetti and the ingredients of pink lemonade to Ferris wheels and merry-go-rounds. Now recreation has grown into a staple essential of American living and into a billion-dollar industry. It is worth perhaps \$100,000,000 a year to the lone state of Maine and it can be listed among the first three "crops" of eleven other states and among the first ten resources of about twenty-five more.

One of the most thorough analyses of recreation expenditures was recently completed by Everett B. Greaton of the Maine Development Commission at Augusta. Here are some of the highlights of the survey, in terms of total recreational receipts of Maine:

Sale of farm produce	\$1,100,000
Contractors and lumber dealers	3,812,200
Plumbing service and supplies	1,016,245
Hardware	1,397,100
Drugs and confectionery	1,802,500
Department store sales	3,018,500
Garages and filling stations	7,884,513

Transportation	\$2,500,000
Wages to caretakers, gardeners, etc.	1,462,430
Shoes and clothing	1,220,868
Antique and gift shops	1,797,536
Furniture	1,122,718
Tearooms and restaurants	2,932,805
Taxes paid on private recreational property owned by residents of other states	1,574,008 ¹

Receipts of summer hotels and camps were \$13,898,000; of overnight camps, \$1,019,450; for boats and yachts, \$3,302,000. But combined receipts for all amusement establishments were only \$929,121—for twenty-second place in the long list of recreational incomes.

A quarter century ago, receipts of amusement establishments would probably have taken first place in recreational incomes. The preponderance of staple merchandise and services now part of the industry and commerce of recreation becomes more apparent in Mr. Greatedon's approximation of how the American vacationist's dollar is spent:

Hotels and sporting camps	16 cents
Groceries	11 "
All other stores	10 "
Rooms, overnight camps, and eating places	7 "
Construction work	7 "
Garages and filling stations	9 "
Amusements and sporting	6 "
Boys' and girls' camps	5 "
Utilities and transportation	4 "
Insurance and taxes	3 "
Farm produce and fuel	3 "
Direct employment	2 "
Antiques and gifts	2 "
All other items	15 "
	<hr/>
	\$1.00

This continues the suggestion that the general pattern of recreational expenditures is by no means fixed or completed. The analysis estimates a total of \$12,000,000 as "miscellaneous" or "estimates of receipts from sources not subject to a definite check-up; among them taxicabs, architects, barbers, beauty shops, blacksmiths, brokers, in-

terior decorators, landscape gardeners, lawyers, music teachers, tutors, outdoor advertising, opticians, real estate dealers, taxidermists, veterinarians, aviation, tree surgery, gratuities." Thus grows a fast-multiplying list of recreational goods and services.

Just as there is a rapid growth in variety of recreational goods and services, so is there a corresponding increase in places of recreation, a growing percentage of which is being centered within home boundaries.

The contemporary story of recreation tells, among other things, that American work and American play are becoming more and more identical; that the recreation crop now stands out as one of the whiter hopes for a defense from agrarian poverty.

To a considerable measure this is a restatement of the truth that as old trades and services die new trades and services can be successfully born. The American feeling for conservation, erratic as it may still be, was never more in evidence than it is today. For rural America at large this is a tremendous factor of hope. It is not inevitable that untilled or unforested land should remain a dragging brake to the wheels of American earning or that farmers without desirable farms should sink to the place of public pensioners.

Nor is it inevitable that agriculture remain the most madly extravagant of all our great enterprises. If farming is a business it is assuredly a wasteful business. But during recent years the labeling of farming as a business has been out of vogue. An urban-minded generation has come to regard it merely as food production. As such it must be an incessant gamble with weather gods, bugs, synthetic price systems, organs of distribution, and vagaries of consumer appetites.

It seems probable that every year each one of us consumes about 1.4 tons of vegetable produce. In one way or another each one of us pays for about 2.8 tons of vegetable materials that are incidental to getting use of 1.4 tons. By and large the good earth of this land seems to effect about 12 per cent of its possibilities for producing usable crops.

For example, the maximum proved yield of corn, foremost American crop, is 225 bushels per acre, while the average current yield for the United States is about 26 bushels to the acre. The maximum proved yield of wheat is 122.5 bushels to the acre; the present aver-

Iris Woolcock

TYPICAL FAR-WEST GRAZING SCENE





Robert F. Maxcy



Arthur Rothstein

(upper) HARVESTING AMERICA'S FOREMOST CROP
(lower) BACKWOODS

age yield about 15 bushels. Three and a third bales of cotton have been raised on a single acre of land, although the average yield is about one-third of one bale. An average potato crop is 115 bushels to the acre; the proved maximum is 1,055.

But in real practice our inefficiency in crop production is of secondary importance to inefficiency in crop consumption. May I again speak of corn? The "normal" corn crops is nearly 3,000,000,000 bushels, with a value usually greater than wheat and cotton or cattle and hogs together. An average acre of corn provides about 1,680 pounds of grain, 4,000 pounds of stalks and leaves, and 560 pounds of cobs. Probably 3 per cent of the stalks find use as livestock feed; the grain is usable, a small portion of the cob is usable. Yet less than a third of the plant growth-weight meets with use. Normal yearly accumulation of plant wastes from corn, cereals, cotton, flax, and sugar cane is estimated at 310,000,000 tons of cellulose and other plant materials, a sizable vanload for every citizen between the ages of one and one hundred.

As consumers of vegetation, we pay billions for stalks, straws, hulls, rinds, and pits, which from a standpoint of real utility are worth to us considerably less than nothing at all, for they wait to be burned, buried, or hauled away.

One biting irony of this incessant pageant of throw-away is that crop wastes involve the very life essence of soil, and soil, according to proverb, is the final savings bank of the nation. Man feeds principally on starches. Yet biologically speaking, starches seem to be devised largely of carbon dioxide and water; whereas the wasted stalks, stovers, and hulls of plants, with their pith and fibers and mocking hollowness, actually consume most of the nitrogen, potash, calcium, and other precious mineral resources of soil—the very elements whose exhaustion spells agrarian ruin, whose replenishment demands the spending of billions for fertilizers.

But we cannot consume any vast quantity of these profitless stalks and stems as food. The actual supply of foods seems plentiful—some would say tragically plentiful. During recent years corn has been burnt as fuel, potatoes have been left undug, green vegetables and edible fruits tossed into rivers and incinerators.

In terms of the immediate, food markets remain colossal mysteries, oppressed by sickened buying power, muddled over by fumbling hands of government, festered by middleman's greed.

We boast of new planning, new economy, new justice. But the nation's estimate of agriculture remains trite and old and inadequate. For first of all it continues to define the farmer as a producer of foods, and its essential plannings are built on a dietary basis.

This dilemma seems first of all a dilemma of definition. The farmer has long since ceased to be merely a producer of foods. He is currently and actually a producer of materials, nonedible as well as edible, industrial as well as culinary. When and if this new concept can be realized, we need no longer concede that the vast panorama of crop waste is preordained by a mysterious and extravagant bucolic providence; that farming, nature's trade, can never rival the efficiency of more synthetic trades.

Falteringly yet persistently, industry seeks to reclassify field crops as materials rather than merely as food, and to behold in this reclassification a new dawn of efficient harvests that may reduce crop wastes nearer and nearer to final extinction.

The complete story of efficient harvests is long, laborious, and paradoxical. Farm by-products of yesterday have become main products of today. Crop waste of today may probably prove crop wealth of tomorrow. Assuredly all changes in vegetation values must be supported by painstaking technical research and stubborn industrial experiment. In this synthetic age a price change of a cent a pound may change the agricultural source of any one of a thousand great commodities—and concepts of profit, like concepts of truth, justice, or art, shift and change like the face of a great river.

But the panorama of crop-waste redemption has progressed well beyond the stage of pipe dreams. In the United States today, saving of crop waste can be recorded as a \$200,000,000-a-year business. Scientific arms of our government labor at some ninety different strivings in increased harvest utility. About 700 private and corporate businesses are making commercial application and experiment. Henry G. Knight, chief of the United States Bureau of Chemistry and Soils, estimates that research in crop-waste savings has thus far yielded a return of \$200 in industrial or farm profits for every dollar spent on laboratory research. United States appropriations for research in crop use total \$17,000,000 a year (roughly one-half the

cost of a first-class battleship dedicated to the tender cause of blasting other first-class battleships to kingdom come).

Meat-packing industries have proved themselves forerunners and trail blazers of efficient harvesting. Fifty years ago the American public was accustomed to consume about one-half the live weight of a meat animal. The rest was waste. But gradually commercial meat packers have lowered this ratio of waste from 50 per cent, or more, to an average of 13 per cent. Through development and exploitation of hundreds of nonfood by-products of meat, and through more versatile processing of edibles, they have succeeded generally in keeping meat consumption in step with an always increasing public, and in salvaging nonfood by-products which represent from 9 to 14 per cent of their business volume. Today meat processors, with all their ill-odors and failings, can make profitable disposition of some 87 per cent of the pig that feeds on corn plants which are only 32 per cent usable.

It seems entirely reasonable to infer biological differences between a corn plant and a hog, between a steer and a stack of hay. Yet there seems to be a synthesis between the animal and its provender, even as there seems to be a synthesis between the plant life that flourishes in our fields today and the jungle growths of carboniferous eras unknown millions of years ago. Yet gas, petroleum, and coal, residues from those unknown eras, prove to be from 90 to 95 per cent consumable.

Likely enough, in these dim lost ages of dinosaurs and protoplasmic swamps there were incessant and stupendous surpluses of virtually every manner of vegetable and animal life. But presumably there were no economists or politicians to worry about surpluses or to propound cures thereof.

Even today one may occasionally blunder on an accepting spirit who fails to become alarmed at the alleged presence of surplus crops. For instance, there is the redoubtable Henry Ford:

“What’s wrong with a surplus? It’s only through a surplus that we learn new uses for things. For example, why use up the forests that we were centuries in making and the mines that required ages to lay down, if we can get the equivalent of forest and mineral products in the annual growth of the fields?”

Mr. Ford envisages the day when materials for automobiles may be grown from soil and above the ground. Even now each one

of his cars is said to contain between 30 and 50 pounds of vegetable matter. But his rhetorical question is not answerable exclusively by Mr. Ford. Industry is finding an increasing army of uses for crop wastes as well as nonfood uses of food crops.

Studying the industrial horizon, we see a new tribe of nonfood products from corn, largest and therefore most wasted of American crops.

In the first place, there is the corncob, whose main commercial use is now in the form of furfural, recently changed from a fad chemical to a staple industrial commodity used in making embalming fluids, adhesives, varnishes, mucilage, insecticides, explosive absorbents, paint and varnish removers, black or brown dyes, printing plates, electrical parts, phonograph records. Recovery of furfural is about 10 per cent of the weight of the dry material and possible sources include all manner of cereal hull wastes and various other discards of milling.

Furfural is by no means the only redemption from the vast agricultural waste that is the corncob. W. W. Skinner, research chief of the United States Bureau of Chemistry and Soils, makes this fanciful suggestion:

"It is not an unreasonably wild speculation, at least to the romancing chemist, to imagine a time when we may ride home from work in a car fitted with electrical equipment made from corncob plastics, and painted with corncob lacquers, enter a home built with corncob boards and covered with corncob shingles, exchange our workcoat for an easy-jacket made of corncob textiles and colored with corncob dyes, seek an easy chair made of corncob products, read the evening gossip from a newspaper made of corncob pulp and printed with corncob ink, toast our toes before an open fire of corncob briquettes, and soothe the senses by smoking a corncob pipe."²

The greater part of the corn crop goes to stalk, and the greater part of the stalk goes to naught. Left to rot in the fields, the stalks are but slight benefit to the soil, to some types of soil an actual damage, and in any case a winter haven for crop-ruining insects.

But now industrial uses for cornstalks are making cautious appearance in building materials, insulating board, sheathing, plaster, and acoustical boards. The company estimates that the waste cornstalks of Iowa alone could produce about 80,000,000,000 square feet

of board a year, provided, of course, there were accommodating citizens at hand who felt the need of it.

The advent of celotex is another colorful chapter in the use of plant celluloses, which, broadly speaking, comprise about 60 per cent of the weight of all field crops. Celotex is made of sugar-cane waste, or bagasse. However skillfully the juice may be pressed from the stalk, a refinery's accumulation of cane residue is likely to be about ten tons to the harvested acre of cane. In earlier years this bagasse had been burned as fuel, or simply burned. Celotex is made by grinding the bagasse to pulp and shaping the pulp into wallboard and similar utilities. The fortunes of Celotex, as of most other building materials, vary and shift with building demands. But commercial use for sugar-cane waste has proved profoundly beneficial to the agriculture of sugar cane.

To the story of usable pulps from plant wastes belong several new chapters of the romance of paper, which is considerably more interesting than the majority of romances on paper.

Virtually any fibrous plant is a possible source of paper, which is no doubt fortunate since the demand for paper is endlessly growing. In the proverbial year's time the proverbial average American consumes about twice his weight in paper (250 pounds). Each day in the United States we use about 40,000 tons of print paper alone, a mere appetizer to a demand which helps more and more to spell out the broadside slaughter of American forests.

For many centuries men have recognized possibilities for making paper from field wastes. In 1929 Chevalier de Welsbach, director of the pre-Hitler government printing plant at Vienna, completed a highly successful experiment in making papers from American cornstalks. The experiment produced letter paper of various styles and colors, chancery papers, silk papers in various colors, even cigarette papers; and having paid \$9 a ton for the cornstalks, produced a net profit of almost \$300 a ton for the late Austrian government.

But the idea is not exclusive to Austria. Patents for making paper from cornstalks and husks were being granted to American inventors as early as 1802. Straw papers were made in Germany as early as 1756 and research files show that usable papers have been made from such varied vegetable wastes as sawdust, grapevines, hemp, virtually all common forest woods, thistle stalks, burdock, barley stems, even cabbages.

Yet currently speaking, our average yearly manufacture of 350,000 tons of wheat straw to paper pulps and boarding materials represents no more than a first gesture for use of crop wastes in papers. The technical possibilities are handsomely proved; the practical issue is one of dollar-and-penny competition between per ton costs of cellulose from crop refuse and cellulose from woods. Mother Nature is impartial. There is slight difference between the actual content of cellulose pulps in common woods, bagasse, mature corn-stalks, and mature cereal straws. But in the manufacture of paper, equipment is expensive and a cubic foot of "digester" space holds about ten pounds of chipped wood and only about three of corn-stalks or straw, which suggests a costly transition in source. On the other hand, stalks and straws are more easily "cooked" by paper-making chemicals than is wood.

All of which seems merely another way of saying that, currently defined, paper from crop wastes is more a possibility than a reality. But it seems reasonably safe to predict that as timber supplies decrease and their costs increase, there will assuredly come a time when other materials will largely replace woods for paper pulps, and that some portion of the "other materials" may be the unsightly stalks and stovers that clutter our fields after every harvest.

We have spoken already of cellulose as a by-product of sugar, which, nutritively speaking, leads us to the subject of milk. And milk is another of our extravagantly wasted crops.

Modern dairying has to a large extent become a technique of butter-fat production, and from a standpoint of literal food value, certainly of possible commercial values, butter and cream are but minor products of milk. In the annual clearance of American creameries are more than 320,000,000 pounds of milk solids. If a development of wider markets could increase the value of these solids by one cent a pound it would mean as much added profit to dairying as could be realized from an increase of two cents a pound for butter.

The foremost nonfood product from milk is casein (3 per cent of original volume). Casein makes buttons, billiard balls, imitation ivory, and various other commercial plastics. It is used in paints and insecticides, in making cloths, adhesives, glues, veneers, and waterproofing. But about three-fourths of all commercial casein finds

use in making commercial papers. And since paper trades have become synonymous with vastness, that is another reason why domestic casein manufacture remains in the neighborhood of 25,000,000 pounds a year (from 214 factories), an amount approximately matched by imports, largely from Argentina.

The foremost vegetable in the United States is the Irish potato; the second is the sweet potato. This rooty cousin to the morning-glory is a tremendous ground-gainer. From a curiosity of the sandy Piedmont it has now changed to an 80,000,000 bushel crop that revels in the light and frequently spent loams that stretch from New Jersey south and west along the Atlantic and Gulf far into Texas. As a rule, market grading of the crop must discard as culls between 30 and 40 per cent of the total yield, and culls spell enormous waste. Recovery of food starches from them would buck another food market glutted with surpluses.

I have listed here a few of the many current strivings in redemption of crop waste, or the acquisition from food crops of nonfood by-products. The complete story cannot possibly be squeezed into the type frame of one mere book. But the few instances are apparently typical.

And it may not be unreasonable to list them as road signs that point to a place and time wherein industry and agriculture may function as companions in production of goods rather than as relentless rivals, wherein competent consumption of crops may change farm products to farm and commercial profits or gains.

To be sure, we have no right to name more thorough consumption of crops as a sure panacea for the still-deplorable plight of farms. But surely the issue does hold a place in the enduring dilemma of food surpluses and shortages. For better use of crops promises to serve as a gyroscope, a balance wheel, for the happier and more spontaneous steering of agricultural destinies.

On the other hand, actual records of food consumption suggest that the poor man of the city is most assuredly faced with an economy of scarcity. Even in 1929, foremost bubble year of American prosperity, such an outstanding statistical staff as that of the Russell Sage Foundation declared that this nation was actually enduring an undersupply and underconsumption of many great food products; that production of milk and cream fell 27,000,000

pounds short of public needs; butter was 2,000,000 pounds short; vegetables, 7,000,000,000; citrus fruits, 3,000,000,000; eggs, many million dozens.

Mary Van Kleeck, director of industrial research for the foundation, declares:

"It has been assumed in the current policies of the United States that the trouble is due to production of 'surplus' as tested by a market that absorbs products at a profit. Hence the effort to destroy the surplus in order to lessen the supply in relation to the demand, thus seeking to raise prices and increase money returns to the farmer. . . . Yet it already has been shown that the people of this country actually lack the necessary quantities of food required for a diet regarded by government officials as proper on a basis of scientific nutritive value."

This testimony is repeated as a quotation, by one who holds the highest regard for the research technique of the Russell Sage Foundation and for the sincerity of its workers. As a people we have vastly too much food in sheds and bins, too little in larders.

Perhaps all these generalities are not too far removed from our subject at hand. Economies of crop consumption seem wholly unable to countenance prevailing economies of crop waste. As an increased percentage of the growth weights of our harvests is put to use; as great crops find avenues for disposal as nonedibles as well as edibles; as materials grown from the land find better scope as materials for industries; stagnant surpluses of food may possibly become active reserves of materials, and when new markets are found for the hulls and stalks and pith of plants, then farmer, processor, and industrialist alike may be able to benefit from new vistas of demand, and to dispense the food portions of crops more graciously and cheaply to the hard-up consumer.

For years capable students of advertising in the United States have believed that better advertising of important farm harvests is the best possible "farm relief" plan. The principle here is that the consuming public can, and for its own good should, eat better and more varied foods, and that the farmer, because he is traditionally the poorest of salesmen, has not been receiving his reasonable share of the budget of the city family.

During the past six years various state legislatures have passed

laws which sponsor national advertising of state-grown farm products. Today such "campaigns" direct the expenditure of more than \$2,500,000 per year for the selling of food products directly from farms.

In 1934 the state of New York appropriated \$500,000 of state funds to advertise its production of milk, footing the bill with a tax of one cent per hundred pounds on milk produced within the state. Through subsequent legislation the work has been carried forward, without attempt to persuade consumers that New York milk is better than that produced in any other state, but rather to exploit milk as a beneficial food. The campaign is apparently successful. Since 1935 annual milk consumption in New York City alone has been increased by 22,000,000 quarts.

Encouraged by provable results in hoisting milk consumption, the state of New York, during 1939, began to advertise other farm products including apples, potatoes, dry beans, onions, eggs, honey, grapes, and maple syrup, with the provision that goods can be sold under a state-approved label only when the products have passed inspection by the State Department of Agriculture and Markets. Here again advertising is paid for with a tax levied against the crop.

Within a year after the embarking of the New York venture, Florida took a similar plunge into state-supervised packing, advertising and selling of oranges, grapefruit, tangerines, and canned juices, for a total advertising expenditure of around \$405,000 for the first year. During 1939 state-supervised expenditure for such advertising climbed to \$850,000, a sum raised by a levy of 1 cent per box on oranges, 3 cents on grapefruit, 5 cents on tangerines, and comparable levies on fruit juices. The state employs about 250 inspectors, who are required to approve every case of fruit exported from the state. Sales-promotion agents are placed at various areas of the East, where the principal portion of the Florida fruit is sold.

In 1937 California began state-financed campaigns for selling fruits raised within the celluloid state and last year climbed ahead of Florida with a total advertising budget of \$886,000. California Vintners, organized by authority of the same marketing act, claims a good share of the credit for increasing consumption of domestic wines by 20 per cent during the past two years. In 1938 California prunegrowers organized a selling body with each member assessing

himself 75 cents per ton for prune advertising. In addition to the operations of its new crop marketing act, California is first home of a group of powerful growers' co-operatives which have, without possibility of doubt, increased California farm incomes by hundreds of millions of dollars during the past twenty years.

Washington State comes fourth in the crop-selling race of states, collecting and spending about \$250,000 a year for the improved advertising and selling of Washington apples. Michigan has instituted a similar campaign for bettering sales and distribution range of Michigan apples.

New Jersey directs co-operative advertising of a wide range of farm crops, which include milk, eggs, apples, blueberries, and asparagus. Wisconsin spends \$75,000 yearly in advertising her renowned dairy products—one good reason why our per capita consumption of cheese has increased from one and a half pounds to about six pounds yearly during the past twenty years.

Maine and Idaho, the two leading potato states and both keenly aware that per capita consumption of potatoes has been falling steadily since the time of the first World War, are now accomplishing a rather amazing job of building a new and brighter aura about the lowly spud. Potato consumption is increasing. The two states employ the same advertising director and the same national advertising agency, and require as a superpublicity attraction that their respective governors indulge in an annual potato-picking contest, in which the governor of Maine invariably triumphs.

Maine is also advertising lobsters and scallops, canned sweet corn and blueberries. Growers pay most of the cost by way of a voluntary assessment on sales output, with the State Department of Agriculture and Fisheries providing inspection service, attesting the quality of each bag, box, or carton of the product and granting label use of the state seal. However, the state of Maine has also appropriated from its treasury certain "nest egg" funds for launching each of the campaigns.

All states have levied or acted to levy taxes against the advertised products in order to finance selling campaigns. The constitutionality of such taxes is still open to question. But thus far no state which has entered the ranks of advertising farm products has chosen to withdraw. It is likely that at least a dozen other states will join the parade before the beginning of 1942. It is equally

probable that total consumption of the products advertised will be materially increased; that farm income will be raised by a great many millions of dollars, and that the rigors of rural poverty will be correspondingly abated.

The undertaking, as a whole, is unquestionably bringing about better inspection, more dependable standardization, and more honest labeling of farm products, from which both farmers and consumers are certain to profit. It places new emphasis on attractive trademarks and packaging of products, and gives fresh produce a better running chance to compete with a fast-spreading era of quick-freeze packing. With the reader's forgiveness I must mention once more that despite popular beliefs about the inelastic qualities of the human stomach, the records clearly prove that domestic consumption of an overwhelming majority of domestic-grown crops (such heavy staples as flour, corn meal, potatoes, and animal fats excepted) has been and therefore unquestionably can be increased as the nation eats more lightly and more variedly of an ever-widening variety of farm and garden harvests. In all, this conclusion is all but inescapable.

It is not impossible that advertising of farm products—if kept on an intelligent and honest plane—may do more good for agriculture and incidentally for national diet and the continuing throes of rural poverty than all the political schemes impounded in twelve thousand hours of political radio broadcasts.⁴

To a commanding measure these ventures in state advertising of crops are concerned with problems of immediate or eventual surpluses. Earlier New Deals, like the unmourned National Farm Board, have now more or less yielded the point that farm surpluses, like truth, are highly relative and more or less inevitable; also that farm surpluses are basic to problems of agrarian poverty. This easy platitude is now fiercely underscored by a new and ever more terrible world war which further aggravates the quandaries of rural poverty throughout this and most other nations.

During its eighth and most turbulent year, the Roosevelt administration began application of one of its most promising experiments, a venture in exchanging food stamps for surplus farm harvests. The experiment was begun in Rochester, New York, late in 1939. The middle of 1940 finds it effective in about 125 cities, and the Federal Surplus Commodities Administration reports that more

than 800 additional towns and cities throughout the United States have applied for permission to participate in the "new order of selling."

The principle of the food stamp is comparatively simple. The Secretary of Agriculture prepares a list of farm products which are "in surplus of market ability to consume." In substitution for its earlier practice of purchasing alleged surpluses of crops for free distribution to "relief clients," the Federal Surplus Commodities Corporation now issues food stamps for purchases of farm surpluses by those receiving federal assistance and, in a few instances, by nonrelief citizens of low income. For each dollar's worth of orange-colored stamps (equivalent of cash for any food product sold) fifty cents' worth of blue stamps are given free—as cash equivalent for purchase of any food product listed as being "in surplus." The grocer then exchanges all stamps for cash at a federal paying office, and the Treasury Department pays the deficit, which now amounts to about \$100,000,000 a year, as food stamps are being bought by more than a million American consumers.

Lists of foods "in surplus" are changed from time to time, but usually number at least seventeen products, among which are such staples as fresh fruits, dried fruits, corn, beans, butter, eggs and pork. Thus far the rosters of surpluses have been uniform throughout the nation, though at some future time local crop surpluses may be placed on food markets within a given city. At Memphis experiments with issuance of cotton stamps harbingers the time when crops other than foods may be placed on the stamp list.

The essential economy of the food stamp is clearly within the "profit system." For it yields real or possible profits to farmers, jobbers, and storekeepers alike while donating food premiums to a thin-pursed public whose capacity to buy food is already strained to the limit. Frederick W. Waugh, director of marketing research for the Bureau of Agricultural Economics of the United States Department of Agriculture, testifies that the food stamp plan "can improve nutrition among low income families" (the poorest third of our population now spends only about \$1.60 per person weekly, or 5 cents a meal, for food), "increase farmers' income by at least as much as the amount of the subsidy, and serve to increase total food production and consumption in the long run, thus acting to discourage the spread of rural poverty."

Milo Perkins, president of the Federal Surplus Commodities Corporation, suggests that maximum operation of the food stamp plan might add as much as 3 per cent, or \$400,000,000, yearly to the crop purchasing power of the United States as a whole, thus raising the present level of farm income by at least 6 per cent.

Like increased efficiency in harvesting and processing of crops, and like more effective advertising and promotion of farm goods of a given state or section, use of food stamps shows considerable promise of aiding social defenses against devastation wrought by extreme rural poverty.

I believe there remains a comparable need for establishing a federal-directed Rural Distribution Commission to supplement the work of the present Interstate Commerce Commission, particularly as regards rural distribution. For faulty or outmoded distribution is also far to the front as a perpetuator of agrarian poverty. Rate legislation and essential functioning of the Interstate Commerce Commission is primarily urban in purpose and approach. Rural America is too frequently the victim of grossly unjust freight rates and numerous faults and flaws in rural transportation are readily correctible.

Abraham Lincoln's celebrated observation that God must love poor people or He wouldn't make so many of them appears to be permanently apropos of rural America.

Since early colonial days a tremendous majority of our country people have been poor. The same old story holds. Today there are tens of millions of poor people within our rural space. Almost inevitably there will be as many tomorrow. Rural poverty seems to be perennial. In a somewhat modified capitalistic state, such as our own, or in a socialistic autocracy, such as Soviet Russia, or in totalitarian bull pens, such as Nazi Germany, or within the comparative anarchy of newer frontiers, such as one encounters in parts of Middle America and South America, agrarian poverty appears to be an economic body as well as a malady of that body.

To advertise cure-alls for the malady, or to exhort arbitrary re-creation of the body, is sheerest quackery. The redeeming hope lies in proved possibilities for reducing the stringency of rural poverty, for alleviating or avoiding its more severe tolls of human suffering

and degradation. Though we classify rural poverty as relatively inevitable we are not entitled to forgo attention to its direr extremities. It is not necessarily inevitable that four-fifths of this nation's farm income should be received by one-third of our farm population, or that the entire rural third of our people should continue to earn little or no more than one-tenth of the national income. There is no preordained fate which separates farm and town by high and impenetrable economic walls. There is no sacred oracle to deny that rural Americans shall be contemporary citizens.

Actually the interdependence of town and country grows more compelling with every passing month. To an impressive extent the nation continues to be repopulated from rural seed. A healthy agriculture unmarred by degrading extremes of poverty is the barometer to a happier and more enlightened life for all of us.

If rural poverty is unavoidable, rural peonage, social starvation, serious physical malnutrition, and widespread illiteracy are and must be avoidable. The avoidance cannot occur merely via exclamations of horror, or by journalistic or political exploitation of rural degradation, or the pointing of index fingers or the wagging of well-oiled heads and tongues. As previously suggested, too, defense against agrarian destitution is not likely to prove expedient politically. It cannot yield prompt and succulent dividends. It cannot be convincingly effected in one season, or one year, or one decade. The defense requires long-term planning and highly adjustable frameworks of execution. It is truly a giant's task. But during the past two decades first beginnings have been made. Some have failed abjectly. Others have inspired widespread hope. A precious minority are actually meeting with measurable success.

This study of our rural landscape has sought to group, to view, and in some measure to evaluate outstanding symptoms of rural poverty and some of the more notable forces of its remedy. Self-evidently the venture is incomplete. In attempting to sketch varied turns and stretches of the United States beyond corporate limits I am deeply indebted to numerous sources of rural research (not the least of which is the able Division of Social Research of the Works Progress Administration) and to the self-stated opinions and testimonies of several hundred rural Americans whom I have recently and personally interviewed. The principal merits of the book

are outgrowths of the latter authorities; the principal demerits are to be placed at my own doorstep.

But the truly sufficient book on rural poverty will never be written with ink or paper. It will be written, and it is being written, with human blood and sweat, on the faces of invincible growing fields.

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